

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Bowman
Application Serial No.: 09/737,185
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Confirmation No.: 9139
For: **PAPERLESS CHAIN OF CUSTODY EVIDENCE FOR LAB SAMPLES**

Appeal No. ----
Group No.: 1743
Examiner: Gakh, Yelena G.

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

Appeal Brief

This Appeal Brief is being transmitted in this application with respect to the Notice of Appeal filed January 11, 2012. Previous Appeal Briefs were filed November 29, 2010 and November 17, 2005, with respect to the Notices of Appeal filed on September 29, 2010; June 28, 2005; and June 12, 2006. The Appeal Brief fee was paid with an earlier brief. Please charge our deposit account \$75.00 for a one month Extension of Time fee. The Commissioner is hereby authorized to charge any additional fees that may be required to Deposit Account 501923.

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APPELLANT'S BRIEF

1. Real Party in Interest

The real party in interest in this appeal is GBF, Inc.

2. Related Appeals and Interferences

There are no appeals or interferences that will directly affect or be directly affected by, or have a bearing on the Board's decision in this appeal. This application was previously the subject of Appeal no. 2009-2011, which was remanded to the Examiner for further work on April 20, 2009. Appellant chose to reopen prosecution, but the Examiner re-sent the case to the Board, where it was assigned Appeal number 2009-014382.

Appellant sought remand for consideration of arguments presented and Appeal number 2009-014382 was dismissed by a paper mailed January 26, 2010. The Examiner reopened prosecution in an office action dated January 19, 2011.

3. Status of the Claims

Claims 1-21, 38 and 40-49 remain in the case with none of the claims being allowed or allowable. Claims 22-37 and 39 were previously cancelled without prejudice. Claims 1-21, 38, and 40-49 are the subject of this appeal.

4. Status of the Amendments

No amendment was submitted after the final Office Action mailed October 11, 2011.

5. Summary of Claimed Subject Matter

Appellant's claimed invention relates to improvements in identification, logistics control, and information management for biomedical specimens collected for diagnostic or toxicology testing. Diagnostic and toxicology specimens are typically collected for analytical testing from donors at collection sites such as hospitals, clinics, or doctors' offices. These specimens are collected in primary specimen containers specifically designed to completely and safely contain the specimens during handling and shipment in order to preserve the integrity of the specimens and to protect the health of persons who come in contact with the containers. In addition, primary toxicological specimen containers are typically provided with tamperproof locks or seals to ensure that the integrities of the toxicological specimens are not breached by unauthorized persons or by mishandling of the containers. The specimen containers are provided from a vessel distribution facility, that can be a manufacturer, distributor, or warehouse.

Successful testing requires the collection, recording, and maintenance of essential information about each diagnostic or toxicology specimen. Such information includes the identity and nature of each specimen, the identity of the specimen donor, the test or tests to be performed on the specimen, the identity of the person collecting the sample, the time and place of collection, and the results of tests performed on the specimen. Also, toxicology specimens typically require written authorizations signed by their donors. Because most specimen collection sites do not have testing laboratories on site, the specimens are typically sent to remote reference laboratories. Accordingly, the pertinent information about a particular specimen must be accurately communicated to the laboratory which tests the specimen, and the laboratory must in turn accurately report the test results for that specimen back to the site where the specimen was originally collected or to another remote site.

Prior to Appellant's invention the recording, maintenance, and communication of specimen and testing information was usually done using preprinted, duplicate-page forms having spaces for manually entering designated information onto the forms. Duplicate copies of the completed forms were used to communicate and record information among and between multiple departments or sites involved with the handling or testing of a specimen. It was common for such forms to have sequential numbers and bar codes that correspond to matching bar coded labels which could be affixed to the specimen containers corresponding to the written information on the associated forms. These bar codes could be scanned to identify the specimens contained in the bar-coded containers, and the bar codes on the forms could be scanned to correlate the recorded information with the specimen. In addition, written or typed information often included on labels on the specimen containers showed details about the contained specimens. The primary specimen containers and copies of the associated forms were typically maintained together by placing them together in secondary containers such as boxes or sleeves. These secondary containers are then transported to a reference laboratory to conduct the required tests on the specimens.

Particularly for toxicology specimens such as urine specimens to be tested for illicit drugs, reliable, legal evidence linking the specimen to be tested to the donor is critical.

Because the specimens originate from multiple remote collection sites, the collection and delivery of such specimens requires coordination between the collection sites, the laboratory, and a courier. Because many collection sites have only a sporadic need for diagnostic or toxicology testing, it is often inefficient for a designated courier to visit a potential collection site daily or semi-daily to possibly collect specimens for delivery. In order to avoid such inefficiency,

collection sites must typically notify either the laboratory or a courier each time specimens are awaiting collection for delivery to the laboratory, causing a different type of inefficiency.

Reference laboratories have typically included automated handling and testing equipment. Such laboratories have had automated sorters and conveyors for routing specimens to testing stations and testing equipment that automatically performed the required tests on the specimens with minimal manual human intervention. However, even such automated laboratories received and inventoried specimens from remote specimen collection sites by manually unpacking each specimen and the associated forms from their boxes or sleeves. The laboratories typically used manual bar code scanners to individually scan the bar code labels on the received specimen containers and forms. The data was then manually input into computers that controlled the automated handling and testing equipment. The specimens were manually staged for introduction into the automated systems. Once testing had been performed on a specimen, a laboratory typically recorded the test results manually on the associated forms and then reported the test results by sending the completed forms to the originating specimen collection site or other selected destination.

Those methods for information management and logistical control for biological specimens collected for diagnostic or toxicology testing caused a number of difficulties. The use of written forms and written labels to record, maintain, and communicate specimen information was especially problematic. Manual entry of information onto forms or labels at collection sites and laboratories was labor intensive and caused delays in processing the specimens and information. Also, written forms or labels were sometimes illegible or became obliterated by handling or spills, causing a loss or miscommunication of essential information. Furthermore, it was necessary to physically maintain copies of the forms with the associated specimens. These

forms added bulk to transport packaging for the specimen containers, and there was a risk of loss or dissociation from the specimens. In addition, the forms had to be individually handled and scanned or read when received by a reference laboratory, adding labor cost and causing delays, leading to underutilization of the automated laboratory handling and test equipment. Lost or dissociated forms could cause potentially harmful delays in the testing or reporting of diagnostic test results for distressed donors experiencing medical emergencies. In addition, if a form containing an authorization signature of a toxicology specimen donor was lost or misplaced, the test could not be performed until the donor again authorized the test.

Bar codes did not eliminate the need for written forms to record and manage specimen information nor the associated problems. In addition, the bar codes on specimens and forms still required individual scanning and conveyed only limited basic identity information about the specimens.

Also, because independent specimen collection sites generated specimens only sporadically, the process of collecting specimens from these sites was problematic. Having couriers regularly visit sites having no specimens for collection wasted labor and transportation costs. Alternatively, having the sites request collection on a case-by-case basis was also labor intensive and subject to communication delays or miscommunication.

As claimed in independent Claim 1 and the claims dependent thereon, the present invention provides a diagnostic specimen system for identifying and controlling biomedical or toxicology specimens and managing information associated with the specimens. Diagnostic systems test for disease and the like. Toxicology tests look for toxic substances, including illegal drugs. The system provides a diagnostic or toxicology specimen container having an electronic memory tag for remote, non-contact recording and reading of data stored therein. Other claims

are directed to embodiments of a method of using the system to manage information associated with the specimens.

The diagnostic specimen system includes a plurality of biomedical specimen collection vessels, such as the vessel 1, shown in Figure 1. Attached to each of the vessels 1 is a wireless electronic memory tag 3 bearing a unique electronic identification code. The tags 3 remain attached to the vessels 1 as each is transported between a vessel distribution facility (such as a vendor's warehouse), a specimen collection facility (such as a doctor's office), and a specimen testing laboratory facility (such as a laboratory), as depicted by the flowchart of Figure 4.

Also, in various embodiments, the memory tags 3 store data representing an identification code for the vessel 1, the identity of the supplier of the vessel 1, and product information about the vessel 1. The data may relate to the specimen donor and may identify the specimen contained in the vessel 1. The data may also define analytical tests to be performed on the specimen. Each vessel 1 may also include an attached label 4 imprinted with an identifying bar code 7. Figures 1 and 5 show these additional optional features of the system.

Claim 9 and its dependents are directed to a toxicology specimen system. As noted above, toxicology specimens are often tested for drugs, so special care in linking the donor and the test result is needed for legal reliability. Collection vessels 1 are configured to receive and contain a toxicology specimen, and wireless electronic memory tags 3 are attached to the vessels. The wireless tags 3 remain attached to the vessels 1 as they are transported. The tags 3 are for non-contact storage and retrieval of information and contain stored data including an encoded electronic signature of the donor of a toxicology specimen. Claims 10-16 detail several additional features, and claim 17 recites several of those features in combination. Claim 38 is directed to the toxicology specimen collection vessel, including a tamper-indicating seal.

Additional embodiments of a toxicology specimen system are claimed that include a plurality of collection vessels 1. Each of the collection vessels 1 is configured to receive and contain a toxicology specimen and has a wireless electronic memory tag 3 attached for non-contact storage and retrieval of information. The memory tag 3 contains stored data including an encoded electronic signature of the donor of a toxicology specimen. The plurality of collection vessels includes a member at a vessel distribution facility, a member at a specimen collection facility, and a member at a specimen testing laboratory facility. Members of the plurality are transportable between the facilities, and the tag 3 is attached to the vessel 1 such that it remains attached to the vessel 1 as it is transported between facilities.

Claim 18 recites a method for electronically storing information on a diagnostic or toxicology specimen vessel 1 and remotely reading information from the vessel 1. The method includes providing a plurality of biomedical specimen vessels 1, as shown in Figure 4. Attached to each of the vessels 1 is a wireless electronic memory tag 3. The plurality of vessels 1 includes members located at and transportable between a vessel distribution facility, a specimen collection facility, and a specimen testing laboratory facility. The method further includes storing data on one of the memory tags 3 at the vessel distribution facility, shipping or distributing the plurality of members with the stored data from the distribution facility to the collection facility, and reading the stored information from the electronic memory tag 3 with a non-contact electronic reader or scanner at a specimen testing laboratory facility. The memory tags 3 remain attached to the vessels during the shipping or distributing.

Claim 19 recites a method involving collecting specimens in the recited vessels and storing information about the specimen and its donor.

Claim 42 recites the plurality of vessels for collecting toxicology specimens, with some members of the plurality at the vessel distribution facility, some at a collection facility and some at a testing laboratory. Claim 43 recites a similar plurality of biomedical specimen collection vessels.

Claim 44 covers either type of specimen collection and details procedures involved in the specimen collection phase.

In an embodiment, the method that is depicted in the flow chart labeled Figure 4 of the application includes collecting a specimen from a donor in the specimen container at the collection facility, and storing information about the specimen, donor, and/or tests to be performed on the specimen on the memory tags 3. The method may also include collecting and storing the electronic signature of the specimen donor on the electronic memory tag at the specimen collection facility.

Use of the invention provides numerous advantages. These include improved reliability in the record handling, since the reliance on human data input is reduced. The shipping cost of the sample-filled vessels is reduced because they no longer need to be packaged with paperwork. The reference laboratory pickup of the vessels is more efficient, since linked computers of the specimen collection facility and specimen testing laboratory facility can be programmed to provide couriers with up-to-date routing information to make stops only at specimen collection facilities where specimens are ready for pick-up. The laboratory facility can enjoy further efficiency gains from being able to scan an incoming load of specimen vessels almost instantaneously and then be able to schedule the required testing stations, personnel or reagents for the respective tests needed on the specimens in the received load. This, in turn, allows the

tests to be completed more quickly, so that the test results can be available more quickly.

Perhaps in some medical situations, lives can be saved by this faster turn-around.

In the field of toxicology testing, the all-important chain of custody is made more reliable, since the identity of the specimen donor remains in the database, linked to the adhered wireless electronic memory tag.

The argued claims on appeal are “mapped” to the specification by page and line number or paragraph number and/or drawings as follows:

1. A diagnostic specimen system comprising a plurality of biomedical specimen collection vessels (Figure 1, item 1), at least some members of the plurality being located at a vessel distribution facility (Figure 5, item 27), other members of the plurality being located at a specimen collection facility (Figure 5, item 28), further members of the plurality being located at a specimen testing laboratory facility (Figure 5, item 31), and additional members of the plurality being transported between the facilities,

wherein each of the collection vessels includes a wireless electronic memory tag, a unique electronic identification code stored on the electronic memory tag (Figure 1, item 3, page 12, line 19) for non-contact storage and retrieval of information directly attached thereto such that the tag remains directly attached to the vessel at the facilities and as the vessel is transported between facilities.

2. A diagnostic specimen system as claimed in claim 1 wherein each electronic memory tag includes a radio frequency transponder. (page 11, lines 13-15)

3. A diagnostic specimen system as claimed in claim 1 wherein each electronic memory tag contains stored data including an identification code for the vessel. (page 11, line 22)

4. A diagnostic specimen system as claimed in claim 3 further including a label imprinted with a bar code attached to each vessel, the bar code identifying the vessel. (page 11, line 5)

5. A diagnostic specimen system as claimed in claim 1 wherein each electronic memory tag contains stored data including the identity of a supplier of the vessel and product information about the vessel. (page 12, line 2)

8. A diagnostic specimen system comprising:

a plurality of collection vessels, at least some members of the plurality being located at a vessel distribution facility (Figure 5, item 27), other members of the plurality being located at a specimen collection facility (Figure 5, item 28), further members of the plurality being located at a specimen testing laboratory facility (Figure 5, item 31), and additional members being transported between the facilities,

wherein each of the collection vessels includes a wireless electronic memory tag (Figure 5), with a unique electronic identification code stored on the electronic memory tag for non-contact storage and retrieval of information directly attached thereto (page 12, line 19) such that the tag remains directly attached to the vessel at the facilities and as the vessel is transported between facilities;

data stored on electronic memory tags of members at the specimen collection facility including an identification code for the vessel to which the tag is directly attached, the identity of the supplier of the vessel (Page 11, line 2) and product information about the vessel (Page 11, line 2), identifying information about a specimen contained in the vessel (Page 11, lines 4-5) and about the specimen donor (Page 11, lines 4-5), and definition of the analytical tests to be performed on the specimen in the vessel (Page 11, lines 5-6); and

a label imprinted with an identifying bar code (Figure 2, item 7) attached to

each vessel.

9. A toxicology specimen system comprising

a plurality of collection vessels (Figure 5, items 27, 28 & 31),

each configured to receive and contain a toxicology specimen and having a wireless electronic memory tag (Figure 3) directly attached to the vessel for non-contact storage and retrieval of information,

wherein the plurality includes members located at a vessel distribution facility, other members of the plurality being located at a specimen collection facility, further members of the plurality being located at a specimen testing laboratory (Figure 5, items 27, 28 & 31),

and additional members being transported between the facilities,

wherein each of the collection vessels includes a wireless electronic memory tag, with a unique electronic identification code stored on the electronic memory tag for non-contact storage and retrieval of information directly attached thereto such (page 12, line 19) that the tag remains directly attached to the vessel at the facilities and as the vessel is transported between facilities (Figure 3).

10. A toxicology specimen system as claimed in claim 9 wherein each electronic memory tag includes a radio frequency transponder. (page 11, line 13-15)

11. A toxicology specimen system as claimed in claim 9 wherein each electronic memory tag contains stored data including an identification code for the vessel. (page 11, line 22)

12. A toxicology specimen system as claimed in claim 11 further including a label imprinted with an identifying bar code attached to each vessel. (page 11, line 5)

13. A toxicology specimen system as claimed in claim 9 wherein each electronic memory tag contains stored data including the identity of the supplier of the vessel and product information about the vessel. (page 12, line 2)

16. A toxicology specimen system as claimed in claim 9 wherein an electronic memory tag contains stored data including an encoded electronic signature of the donor of a toxicology specimen. (page 13, line 24- page 14, line 2)

17. A toxicology specimen system (Page 2, lines 16-17) comprising:
a plurality of biomedical specimen collection vessels, wherein the plurality includes members located at a vessel distribution facility, other members of the plurality being located at a specimen collection facility, further members of the plurality being located at a specimen testing laboratory facility (Figure 5, items 27, 28 & 31), and additional members of the plurality being transported between the facilities,

each vessel having a wireless electronic memory tag directly attached to the vessel such that the tag remains directly attached to the vessel at the facilities and as the vessel is transported between facilities, the electronic memory tag including a radio frequency transponder for non-contact storage and retrieval of information (Page 11, lines 13-21);

data stored on the electronic memory tags including an identification code for the vessel that is unique to the tag on the vessel (Figure 4, item 11), the identity of the supplier of the vessel (Page 11, line 2) and product information about the vessel (Page 11, line 2), identifying information about a specimen contained in the vessel and about the specimen donor (Page 11, lines 4-5), definition of the analytical tests to be performed on the specimen in the vessel (Page 11, lines 5-6), and an encoded electronic signature of the donor of the toxicology specimen in the vessel (Page 13, line 24 – page 14, line 1); and

a label imprinted with an identifying bar code attached to each vessel. (Figure 2, item 7).

18. A method for electronically storing data on a diagnostic or toxicology specimen vessel and remotely reading data from the vessel comprising:

at a vessel distribution facility (Figure 5, items 27, 28 & 31) providing a plurality of biomedical specimen vessels, each having a wireless electronic memory tag directly attached thereto, with data electronically stored on the electronic memory tag including an electronic identification code stored on the electronic memory tag that is unique to the tag (Figure 4, item 11, page 12, line 19);

shipping members of the plurality having the electronic memory tags directly attached thereto with electronically stored data from the vessel distribution facility to a specimen collection facility (Figure 4, item 13); and

subsequently reading the stored data from the electronic memory tags with a non-contact electronic reader or scanner at a specimen testing laboratory facility (Figure 4, item 21).

19. A method for recording information about a diagnostic or toxicology specimen on a diagnostic or toxicology specimen vessel comprising:

at a vessel distribution facility (Figure 4, item 10) providing a plurality of biomedical specimen vessels, each having a wireless electronic memory tag directly attached to the vessel (Figure 4, item 11), with a unique electronic identification code stored on the electronic memory tag (Page 12, line 19);

distributing plurality members including the wireless electronic memory tag directly attached thereto to a specimen collection facilities (Figure 4, item 13);

collecting a specimen from a donor in the specimen vessel at one of the specimen collection facilities (Figure 4, item 14); and

electronically storing information about the specimen, donor, and/or tests to be performed on the specimen on the electronic memory tag at the specimen collection facility at which the specimen is collected. (Page 11, lines 2-7).

20. A method as claimed in claim 19 further including collecting and storing an electronic signature of the specimen donor on the electronic memory tag at the specimen collection facility at which the specimen is collected. (page 13, line 24 to page 14, line 2)

21. A method as claimed in claim 19 further including transporting the member vessel with collected specimen from the specimen collection facility to a specimen testing laboratory and storing the results of the analytical tests performed on the specimen in the vessel on the electronic memory tag at the specimen testing laboratory. (page 11, lines 2-7)

38. A toxicology specimen system (Page 2, lines 16-17) comprising
a collection vessel (Figure 1) configured to receive and contain a toxicology specimen
(Page 2, lines 16-17),

a tamper-indicating seal, (Page 11, lines 10-12) and
wireless electronic memory tag directly attached to the vessel such that the tag remains
directly attached to the vessel as the vessel is transported (Figure 1, item 3, page 12, line 19), the
tag providing non-contact storage and retrieval of information and wherein the electronic
memory tag contains stored data including an encoded electronic signature of the donor of a
toxicology specimen (Page 13, line 24 – page 14, line 1) and a unique electronic identification
code stored on the electronic memory tag.

42. A toxicology specimen system (Page 2, lines 16-17) comprising
a plurality of collection vessels (Figure 4, item 10),

each member of the plurality of collection vessels configured to receive and contain a toxicology specimen and having a wireless electronic memory tag directly attached to the vessel for non-contact storage and retrieval of information (Page 11, lines 13-21), the memory tag containing a unique electronic identification code stored on the electronic memory tag (Page 12, line 19) and stored data including an encoded electronic signature of the donor of a toxicology specimen (Page 13, line 24 – Page 14, line 1),

wherein the plurality includes a member at a specimen collection facility; and a member at a specimen testing laboratory facility and

wherein the members are transportable between the facilities and the tag is directly attached to the vessel such that it remains directly attached to the vessel at the facilities and as the vessel is transported between facilities (Figure 5, items 27, 28 & 31).

43. A toxicology specimen system (Page 2, lines 16-17) comprising:

a biomedical specimen collection vessel and a tamper-indicating, wireless electronic memory tag (Page 11, lines 10-12) having a unique electronic identification code stored on the electronic memory tag, the tag being directly attached to the vessel such that the tag remains directly attached to the vessel as the vessel is shipped to and among a vessel distribution facility, a specimen collection facility, and a specimen testing laboratory facility (Figure 5, items 27, 28 & 31), the tag including a radio frequency transponder for non-contact storage and retrieval of information (Page 11, lines 13-21);

data stored on the electronic memory tag including an identification code for the vessel (Figure 4, item 11), the identity of the supplier of the vessel (Page 11, line 2) and product information about the vessel (Page 11, line 2), the tag configured to receive identifying information about a specimen contained in the vessel and about the specimen donor (Page 11,

lines 4-5), definition of the analytical tests to be performed on the specimen in the vessel (Page 11, lines 5-6), and an encoded electronic signature of the donor of the toxicology specimen in the vessel (Page 13, line 24 – Page 14, line 1); and

a label imprinted with an identifying bar code (Figure 2, item 7).

44. A method for recording information about a diagnostic or toxicology specimen on a diagnostic or toxicology specimen vessel (Page 2, lines 16-17) comprising:

providing a plurality of biomedical specimen vessels, each of the specimen vessels having a wireless electronic memory tag directly attached to the specimen vessel, wherein the plurality includes a member at a vessel distribution facility (Figure 4, item 10), a member at a specimen collection facility (Figure 5, item 28), and a member at a specimen testing laboratory facility (Figure 5, item 31), and wherein each of the vessels includes a wireless electronic memory tag with a unique electronic identification code stored on the electronic memory tag (Figure 3, page 12, line 19) directly attached thereto such that the tag remains directly attached to the vessel at the facilities and as the vessel (Figure 1, item 3) is transported between facilities;

collecting a specimen from a donor in a specimen vessel at the specimen collection facility (Figure 4, item 14);

electronically storing information about the specimen, donor, and/or tests to be performed on the specimen on the electronic memory tag (Page 11, lines 2-7) attached to the vessel into which the specimen is collected at the facility (Page 13, line 24 – page 14, line 1) including the electronic signature of the specimen donor.

45. A diagnostic specimen system as claimed in claim 1 wherein the specimen collection facility is selected from the group consisting of hospitals, clinics, doctors' offices and combinations thereof. (page 12, line 24 to page 13, line 1)

46. A diagnostic specimen system as claimed in claim 1 wherein the specimen collection facility and specimen testing laboratory facility are remote from one another so that members of the plurality at the specimen collection facility being transported to the specimen testing laboratory facility are couriered from the specimen collection facility to the specimen testing laboratory facility. (page 14, lines 13-16)

47. A diagnostic specimen system as claimed in claim 1 wherein the specimen collection facility and specimen testing laboratory facility are remote from one another so that members of the plurality at the specimen collection facility being transported to the specimen testing laboratory facility travel in a shipping carton. (page 14, line 20)

48. A diagnostic specimen system as claimed in claim 1 wherein none of the members of the plurality located at the vessel distribution facility contain specimens (page 12, lines 17-18) and some of the members of the plurality located at the specimen collection facility and specimen testing laboratory facility contain specimens. (page 13, lines 1-6)

49. A plurality of biomedical specimen collection vessels comprising plurality members located at a vessel distribution facility (Figure 5, item 27), plurality members located at a specimen collection facility (Figure 5, item 28), and plurality members located at a specimen testing laboratory facility (Figure 5, item 31),

wherein each vessel of the plurality has a wireless electronic memory tag directly attached to the vessel, the electronic memory tag including a radio frequency transponder for non-contact storage and retrieval of information (Figure 1, item 3),

wherein data stored on the electronic memory tags of all of the plurality members includes a unique identification code for the vessel (Page 12, line 19),

wherein data stored on the electronic memory tags of the plurality members located at the specimen collection facility and specimen testing laboratory facility includes identifying information about a specimen contained in the vessel (Page 11, lines 4-5) and about the specimen donor (Page 11, lines 4-5), and an encoded electronic signature of the donor of the toxicology specimen in the vessel (page 13, line 24 – Page 14, line 1), but the data stored on the electronic memory tags of the plurality members located at the vessel distribution facility does not include identifying information about a specimen contained in the vessel, nor information about the specimen donor, nor an encoded electronic signature of the donor of the toxicology specimen in the vessel.

6. Grounds of Rejection to be Reviewed on Appeal

The following rejections are appealed:

- A. Whether Claims 1-8 and Claims 9-17 are substantial duplicates.
- B. Whether Claims 1-17, 40-42, 44-49 contain new matter and fail to comply with the written description requirement as to a “plurality of vessels.”
- C. Whether Claims 1-21, 38 and 40-49 fail to comply with the written description requirement as to “electronic memory tag.”
- D. Whether Claims 1-21, 38, 40-49 are indefinite under 35 U.S.C. 112, second paragraph.
- E. Whether Claims 1-4, 6-7, 9-12, 14-15, 19, 21, 38, and 40-41 are anticipated by U.S. Patent No. 6,535,129 to Petrick (“Petrick”) under 35 U.S.C. 102(b).
- F. Whether Claims 1, 6-7, 9, 14-15, 19, 21, and 40-41 are anticipated under 35 U.S.C. 102(b) by U.S. Patent No. 5,777,303 to Berney (“Berney”).
- G. Whether Claims 5, 8, and 13 are unpatentable under 35 U.S.C. 103(a) over Petrick or Berney in view of U.S. Patent No. 5,314,421 to Leuenberger (“Leuenberger”).
- H. Whether Claims 16-17, 20, and 42-44 are unpatentable under 35 U.S.C. 103(a) over Petrick or Berney in view of U.S. Patent No. 5,613,012 to Hoffman et al. (“Hoffman”) or U.S. Patent No. 5,948,103 to Fukuzaki (“Fukuzaki”).
- I. Whether Claims 2 and 10 are unpatentable under 35 U.S.C. 103(a) over Berney in view of disclosure of RD 421048 A (“RD 421048 A”).
- J. Whether Claims 3-4 and 11-12 are unpatentable under 35 U.S.C. 103(a) over Berney in view of EP 1,004,359 A2 to Stevens et al. (“Stevens”).

- K. Whether Claim 38 is unpatentable under 35 U.S.C. 103(a) over Berney in view of U.S. Patent No. 5,135,313 to Bowman ("Bowman").
- L. Whether Claim 8 is unpatentable under 35 U.S.C. 103(a) over Berney, in view of RD 421048 A, Stevens and Leuenberger.
- M. Whether Claim 17 is unpatentable under 35 U.S.C. 103(a) over Berney, in view of RD 421048 A, Stevens, Leuenberger and Hoffman or Fukuzaki.
- N. Whether Claims 1-4, 6-7, 9-12, 14-15, 19, 21, 38, 40-41 and 45-49 are unpatentable over Stevens in view of Moore, "Barcodes 2D or RFID?" December 1999, *Parcel Industry*.
- O. Whether Claims 5, 8, 13 and 18 are unpatentable over Stevens in view of Moore in further view of Leuenberger.
- P. Whether Claims 16-17, 20 and 42-44 are unpatentable over Stevens in view of Moore in further view of Hoffman or Fukuzaki.

7. Arguments

A. Claims 1-8 and 9-17 are Not Substantial Duplicates

Claims 1-8 and 9-17 are not substantial duplicates. The Examiner indicates on pages 2-3 of the October 11, 2011, office action that she deems claims 1-8 and 9-17 to be substantial duplicates and makes a provisional rejection. As the Board considers this appeal, given this application's already lengthy pendency, it is requested that direction be given to the examiner not to make such a rejection.

While it is true that the two sets of claims have much in common, they are not identical. Claims 1-8 are directed to a diagnostic specimen system wherein the vessels are biomedical specimen collection vessels. These vessels, being used for diagnostic purposes, do not have the same legal implication that the toxicology specimen system vessels of claims 9-17 have. Toxicology testing is usually done for illicit drugs as the toxins. When undertaking such toxicology testing, security of the integrity of the specimen and its association with the donor of the specimen must be maintained in order to correctly correlate the toxicology test results with the person from whom the specimen is taken, for evidentiary purposes. While connecting a diagnostic test result to the donor is also considered of importance, the risk of tampering by anyone along the chain of custody of a diagnostic sample is much lower than for a toxicology sample. There are collection vessels designed specifically for toxicology tests, such as those disclosed in US Patent 5,133,470 to Abrams, et al., for example. Thus the different terms "biomedical specimen collection vessels" and "collection vessels, each configured to receive and contain a toxicology specimen" cause the claims to differ in subject matter. The claims are not identical, and it is requested the Board direct the Examiner to not make such a rejection based upon the alleged duplication.

B. The original specification and drawings provide written description support for “plurality of vessels.”

The office action rejected claims 1-17, 40-42 and 44-49 under 35 USC § 112, first paragraph as failing to comply with the written description requirement as to the phrase “plurality of vessels.” While that specific terminology is not present in the original specification, there is no requirement that the claim language be set forth *in haec verba* in the specification. As the Court of Customs and Patent Appeals pointed out in *In re Smith*, 481 F.2d 910, 178 U.S.P.Q. 620 (CCPA 1973):

“Compliance with the first paragraph of § 112 is adjudged from the perspective of the person skilled in the relevant art. This court has held that claimed subject matter need not be described *in haec verba* in the specification in order for that specification to satisfy the description requirement, *In re Smith*, supra; *In re Lukach*, 442 F.2d 967, 58 CCPA 1233 (1971), although where there is exact correspondence between the claim language and original specification disclosure, the description requirement would normally be satisfied. See *Snitzer v. Etzel*, supra; *In re Robins*, 429 F.2d 452, 57 CCPA 1321 (1970). The specification as originally filed must convey clearly to those skilled in the art the information that the applicant has invented the specific subject matter later claimed. *In re Ruschig*, supra, 379 F.2d at 996, 54 CCPA at 1559. When the original specification accomplishes that, regardless of how it accomplishes it, the essential goal of the description requirement is realized. See, e. g., *In re Smythe*, Cust. & Pat.App., 480 F.2d 1376, decided June 28, 1973.”

Certainly those of ordinary skill in the art will understand that a plurality of vessels are disclosed and are transported and used in the manner claimed in the claims on appeal. In particular, the Board’s attention is directed to page 6, lines 24 to page 10, lines 7 of Appellant’s specification, disclosing the way the specimens in the vessels or containers are distributed. That passage clearly refers to numerous occasions to the plurality of the containers by referring to the containers in the plural: “containers.” See for example, page 7, line 11; page 7, line 12; page 7, line 20-23; line 25, and so on. Figure 5 of Appellant’s application illustrates, schematically, a specimen container supplier, a specimen collection site, and a laboratory. One of ordinary skill

would understand that Appellant claims a system that includes a plurality of vessels, members of which are at specified facilities and transported between the facilities.

As the Supreme Court pointed out in *KSR International v. Teleflex*, 550 U.S. 398 (2007), those of ordinary skill in the art are not automatons. Those of ordinary skill in the art can certainly see the teachings of the claims in these passages. As a result, the rejections on the ground of written description for the phrase “plurality of vessels” should be withdrawn.

C. There is Written Description Support for “Electronic Memory Tag”

The office action alleged that there was no written description support for “electronic memory tag.” This rejection is respectfully traversed. No similar rejection was made in any of the **first eight office actions or five prior Examiner’s answers** in this application, so the Examiner saw that the support was present in the thirteen previous times she considered this application. In support of the rejection, the Examiner cited references with dates (2006 and 2010), years after Appellants’ filing date, and those apparently improperly affected her judgment in the most recent office action. The rejection seems to require that Appellants have disclosed those later-invented things in order to satisfy this new standard. That is not the law. This rejection should be reversed. Appellants cited a specific example of an electronic memory tag – Texas Instruments Tag-It products – at the top of page 4, and a copy of prior art product literature about the Tag-it product was submitted with an information disclosure statement. Additional teaching of what these products may be is set forth at page 4, line 22 through page 5, line 13.

In addition, Appellant’s specification at page 10, line 26 to page 11, line 13 and Figures 1-3 provide additional written description:

‘The present invention provides a diagnostic or toxicology specimen container having a wireless electronic memory tag for non-contact storage and

retrieval of information. As seen in FIG. 1, a vessel 1 is provided with a cap 2 for sealingly receiving a biomedical specimen within the vessel 1. An electronic memory tag 3 is affixed to an exterior surface of the vessel 1. An enlarged front view of a preferred embodiment of the electronic memory tag 3 is shown in FIG. 2. The electronic memory tag 3 includes a carrier label 4 which has a front face 5 and a rear face 6. Preferably, the front face 5 is imprinted with an identification bar code 7. A text area 8 is also provided for printing, typing, or writing pertinent information on the front face 5 of the carrier label 4. A detail view of the rear face 6 of the carrier label 4 is shown in FIG. 3. An electronic memory device 9 is attached to the rear face 6. Alternatively, the invention may include a separate electronic memory tag 3 and a second printed label having a bar code 7 imprinted thereon (not shown). The apparatus of Figures 1-3 may be used for either a diagnostic or toxicology specimen. For toxicology specimens, the specimen containers may further include a tamper-resistant or tamper-evident locking or sealing device (not shown)."

The tag 3 includes a label 4 that has the device 9 on its back. Thus, the tag is mounted directly on the vessel.

The office action indicates that the Examiner is interpreting the phrase "electronic memory tag" in light of the disclosure of US Patent 7,032,822. That is clearly not a reasonable construction for a claim to Appellant's application. These rejections should be reversed.

D. Claims 1-21 and 40-44 Are Not Indefinite.

The Examiner rejected Claims 1-21 and 40-44 as indefinite, incorrectly asserting that certain of Appellant's claim limitations do not recite a particular structure, and so, do not limit the scope of its claims.

The Examiner apparently has a problem with claiming the vessels as being in different facilities and taking into account their movement between the facilities. Even if the claims are construed to cover a situation that may exist only momentarily, it will exist. A series of specimen collection vessels starting at the vessel distribution facility and working their way to the specimen collection facility and laboratory facility will, at least temporarily, be in the positions claimed. The fact that the claims cover a situation that may not be permanent as to a

particular set of vessels does not make them indefinite. See *In re Hruby*, 373 F.2d 997, 153 USPQ 61 (CCPA 1967) holding that the pattern of water made in a water fountain is a manufacture, despite the fact that the water is in movement and does not statically remain as depicted.

The Examiner wonders about the changing status of the vessels, but that is not proper. Even a short-lived state of affairs – like the pattern of a water fountain, suffices. Other, indisputable articles of manufacture, (let's say an iPhone 4), has a finite life (let's say 10 years to be conservative). From the perspective of a 13.7 billion year old universe, ten years is quite transient. According to the Examiner's interpretation, if that life of ten years shrinks to ten milliseconds, a claim to the iPhone would cease to meet ¶112 paragraph 2.

The Examiner concludes (bottom of page 5 of the October 11, 2011 office action) that the location recitations make the claims unclear, without citing authority for her position. Appellant believes the location definitions are to be given weight and are definite, but even if they were not given weight, the result would simply be very broad claims to manufactures still definite. Appellant may claim a manufacture under 35 U.S.C. 101, and further limiting the claims by reference to locations that may be temporary does not render such claims indefinite.

Patent claims frequently recite elements in various positions, and those positions are attributes of the elements that are given weight in the evaluation of patentability. Literally thousands of issued U.S. patents employ the term "located at" or some very similar variation thereof in their claims to describe the subject matter protected. Attached as Exhibit A are claims from 18 patents where the location of an article of manufacture or component thereof is mentioned in a claim. Did the Patent and Trademark Office mistakenly issue all of these patents?

The Examiner cites no authority for her finding that the recitation of a plurality of vessels at the locations enumerated in Appellant's claims is to be given no weight, and indeed, counsel has found none in his research. The dissection of a claim to pick and choose elements that may or may not be statutory subject matter has long been eschewed. *In re Deutsch*, 553 F.2d 689, 693, 193 U.S.P.Q. 645 (CCPA 1977).

Instead of being language to be ignored, recitations of the location of elements can be a critical element in determining patentability under section 103. For example, as is well known, if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) In *Gordon*, the claimed device was a blood filter assembly for use during medical procedures wherein both the inlet and outlet for the blood were **located** at the bottom end of the filter assembly, and wherein a gas vent was present at the top of the filter assembly. The prior art reference taught a liquid strainer for removing dirt and water from gasoline and other light oils wherein the inlet and outlet were at the top of the device, and wherein a pet-cock (stopcock) was located at the bottom of the device for periodically removing the collected dirt and water. The reference further taught that the separation is assisted by gravity. This Board concluded the claims were *prima facie* obvious, reasoning that it would have been obvious to turn the reference device upside down. The Court of Appeals reversed, finding that if the prior art device was turned upside down, it would be inoperable for its intended purpose because the gasoline to be filtered would be trapped at the top, the water and heavier oils sought to be separated would flow out of the outlet instead of the purified gasoline, and the screen would become clogged. MPEP 2143.01 Hence, whether the inlets were **located** at the top or the bottom was critically important.

In fact, claims have been held invalid for NOT reciting a location. If the specification discloses that a particular location is critical or essential to the practice of the invention, failure to recite or include that particular location in the claims may provide a basis for a rejection based on the ground that those claims are not supported by an enabling disclosure. *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). In *Mayhew*, the Examiner argued that the only mode of operation of the process disclosed in the specification involved the use of a cooling zone at a particular location in the processing cycle. The claims were rejected because they failed to specify either a cooling step or the **location** of the step in the process. The court was convinced that the cooling bath and its **location** were essential, and held that claims which failed to recite the use of a cooling zone, specifically located, were not supported by an enabling disclosure. MPEP 2174.

Similarly, in *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473, 45 USPQ2d 1498 (Fed. Cir. 1998) claims to a sectional sofa comprising, inter alia, a console and a control means were held invalid for failing to satisfy the written description requirement where the claims were broadened during prosecution by removing the limitation defining the **location** of the control means.

Definiteness of claim language under 35 U.S.C. 112 is analyzed in light of the content of the particular application disclosure, the teachings of the prior art, and the claim interpretation that would be given by one of ordinary skill in the art at the time of the invention.¹ Potential infringers need to be apprised of the scope of patent protection defined by a patent's claims, and they would have no problem with Appellant's claims in that regard.

¹ MPEP 2173.02.

E. Claims 1-4, 6-7, 9-12, 14-15, 19, 21, 38, 40-41, and 44 Are Not Anticipated by Petrick.

The Patent Office accorded Appellant a filing date of December 14, 2000 for the application that is the subject of this Appeal. After several official exchanges between the Examiner and Appellant, an Office Action mailed January 15, 2004, rejected claims of the application for the first time under 35 U.S.C. 102(e) over U.S. Patent 6,535,129 to Petrick, which issued March 18, 2003 on an application filed November 17, 2000. Appellant submitted Rule 1.131 declarations of co-inventors Jason Bowman, Danny Charles Bowman and David Michael Lewis showing invention of the claimed subject matter antedating the filing date of Petrick to remove the reference as prior art.² Copies of these declarations are attached as part of the Evidence Appendix.

The Examiner found no fault in the proof that Appellant antedates Petrick. Instead, she “indicate[d] that [Appellant’s and Petrick’s] inventions are not patentably distinct, so that 37 CFR 1.131 is not available to Appellants.” The Appellant and Examiner have exchanged papers for years on this question, but the office action of October 11, 2011, ignores the Rule 131 declarations. As a result, and to facilitate review, Appellant will refer to prior office actions when the Examiner contended that Appellants and Petrick claimed the same invention.

Petrick discloses a chain of custody form that has a radio frequency identification chip built into the form in order to establish a chain of custody that Petrick points out as being very important. As seen in Petrick’s Figure 3b, the form is a conventional business form, allowing data to be entered by pen or pencil, with a tear strip on the right side encapsulating the RFID chip. Figure 3A has the RFID chip in the top of the form. The person taking the sample from

² Appellant first responded June 15, 2004 to the Office Action mailed January 15, 2004. The Patent Office then issued a Notice of Non-Compliant Amendment July 6, 2004, to which Appellant responded July 9, 2004. Appellant later also submitted a Supplemental Response to the June 15, 2004 Office Action on July 23, 2004. The declarations swearing behind Petrick are contained in these three submissions following the June 15, 2004 Office Action.

the donor fills out the form and tears the RFID chip off the form to paste it to the collection container. That enables the data in the RFID chip to travel attached to the container to the laboratory. Petrick's RFID chip starts out being attached to the paper business form, not a collection container. This paper connection is the foundation of Petrick's chain of custody proof. Of importance to Petrick is the fact that the tearing of the chip from the form causes at least partial destruction of the form to provide visual evidence of the correlation of the chip with the form, so that the data on the form becomes linked to the RFID chip. (See column 3, lines 43-46). Petrick says nothing about a vessel distribution facility, or members of a plurality of vessels located there. Figure 1 shows that the use of the form starts with the collection custodian (comparable to appellant's "specimen collection facility"). The custodian tears the RFID chip off of the form and uses it to seal the container holding the specimen. (See column 3, lines 38-55) She also enters data into the business form.

The Petrick specification at column 3, lines 17-20 indicates that an RFID chip may be associated with the container 100 or the form 102. However, the claims of Petrick do not read on the RFID chip being associated with the container to start with. Instead, they are limited to the RFID chip being a part of the business form so that "de-associating the device from the form results in at least partial destruction of the form in a manner that is readily seen through visual inspection of the form." See claim 8 of Petrick, column 6, lines 32-34.

Johnson & Johnston Associates v. R.E. Service Co., 285 F.3d 1046 (Fed.Cir.2002) (en banc), held that a patent applicant who discloses but does not claim subject matter has dedicated that matter to the public and cannot reclaim the disclosed matter under the doctrine of equivalents. Thus, the claims of the Petrick patent cannot be construed to read on an embodiment in which an RFID chip starts out affixed to the container before it gets to the

collection custodian, but must be limited to an RFID chip that is part of the business form from which it must be removed – leaving destruction as evidence.

MPEP §715.05 incorporates 37 CFR 41.203(a) to define “same patentable invention,” which states the general rule for determining whether an application is claiming the same patentable invention as a patent thusly:

Interfering subject matter. An interference exists if the subject matter of a claim of one party would, if prior art, have anticipated or rendered obvious the subject matter of a claim of the opposing part and vice versa.

In the first step of the analysis, the claimed invention of Petrick is presumed to be prior art to the Appellant. If Appellant’s claim is new and non-obvious in view of Petrick’s claim, the claims describe separate patentable inventions. If not, the second step is undertaken in which Appellant’s claim is presumed to be prior art to Petrick’s, and the reverse analysis is performed. If Petrick’s claim is new and non-obvious in view of Appellant’s claim, the claims describe separate patentable inventions. The claims describe the same patentable inventions only if Petrick’s claimed invention anticipates or renders obvious Appellant’s claimed invention and vice versa. The analysis refers only to the parties’ claims, not the remainder of the specifications. In this case neither party’s claims anticipate or make obvious the claims of the other party.

E.1. Evaluation of Appellant's System Claims 1-17 and 40-43

Petrick's Claims 1 and 7 read:

1. A business form comprising:

a first portion providing chain of custody information therein; and

a second portion linking said form with at least one specimen;

wherein said business form further includes a wireless
identification device associated therewith that electronically
provides at least an identifier in response to a query for
automatically establishing the chain of custody of said specimen,
said wireless identification device being associated with the form
such that de-associating the device from the form results in at least
partial destruction of the form in a manner that is readily seen
through visual inspection of the form.

7. The business form of Claim 1 wherein said wireless
identification device is adhered directly to the specimen or to a
container containing the specimen.

And Appellant's Claim 1 states:

1. A diagnostic specimen system comprising a plurality of
biomedical specimen collection vessels, at least some members of

the plurality being located at a vessel distribution facility, other members of the plurality being located at a specimen collection facility, further members of the plurality being located at a specimen testing laboratory facility, and additional members of the plurality being transported between the facilities,

wherein each of the collection vessels includes a wireless electronic memory tag, a unique electronic identification code stored on the electronic memory tag for non-contact storage and retrieval of information directly attached thereto such that the tag remains directly attached to the vessel at the facilities and as the vessel is transported between facilities.

Thus, Petrick's claim requires the *wireless identification device to be associated with the form such that de-associating the device from the form results in at least partial destruction of the form in a manner that is readily seen through visual inspection of the form*, necessarily implying some physical connection of the form to the wireless identification device. Petrick does not claim any vessels with identification devices at a vessel distribution facility. Appellant's claims, on the other hand, all have a requirement that the plurality of specimen collection vessels having a wireless electronic memory tag directly attached to the vessel include members at the vessel distribution facility. Furthermore, Appellant's claims do not mention a business form at all, much less first and second portions of a form, the disassociation of which results in visible partial destruction.

In the July 13, 2010, office action page 17-18, the Examiner quoted page 11 of Appellant's specification that discusses a label 4 for the vessel, and she concludes that the label is the same as Petrick's business form. Her conclusion is erroneous. Appellant does not disclose, and certainly does not claim, destruction of the label to de-associate the device from the form, as required by Petrick's claim. Nor would it make sense to tear the chip off Appellant's vessel, since that destroys the intended functionality. In fact, Appellant's claims says the memory tag is directly attached to the vessel in a way so that it remains attached at the facilities and as the vessel is transported. Again, the Examiner's analysis does not limit the comparison of what Appellant claims to what Petrick claims.

E.I.(a) Assuming Petrick is Prior Art to Appellant for 41.203(a)Test

Assuming Petrick's claim is prior art, Appellant's claim is novel. Appellant's claim describes a diagnostic specimen system including a plurality of collection vessels having members at specified locations. Petrick's claim does not disclose multiple vessels at the specified locations. Appellant's claim is therefore new in view of Petrick's claimed invention.

Appellant's diagnostic specimen system is also not an obvious variation of Petrick's business form. Nothing in Petrick's claim teaches or suggests the vessels at various locations set forth in Appellant's claim, particularly not the vessels at a vessel distribution facility and bearing the memory tag. Petrick puts the tag on the container at the specimen collection facility, after the specimen has been collected in the container (Column 3, lines 6-16).

Appellant's claim is not directed to the same subject matter. Petrick claims a business form; Appellant claims a system comprising a plurality of vessels. Petrick's wireless identification device is attached to the form in her claim 1-- not the specimen collection vessel.

Petrick's Figure 3B embodiment discussed at column 5, lines 19-36 (and her claim 7) suggests removing the wireless identification device from the form as part of a label used to seal the vessel shut. But, that still completely omits (and contra-indicates!) vessels with the tags at the vessel distribution facility, since Petrick's seal and RFID chip can not be added until the specimen has been collected in order to be consistent with Petrick's column 3, lines 38-56. Petrick emphasizes the importance of keeping the tag with the form, (at least until conspicuous removal takes place), so it would not have been obvious to put the tag on the vessel at the vessel distribution facility. Therefore, Appellant is not claiming the same patentable invention as Petrick's Claim 1 or 7, since doing so would negate what Petrick takes pains to make happen.

E.1.(b) Assuming Appellant Is Prior Art to Petrick for 41.203(a) Test

If Appellant's claim is assumed to be prior art to Petrick's, the same result obtains. Petrick's claim 1 requires a new business form having two portions and a particular association between the business form and the wireless identification device. Appellant's claim does not disclose or suggest a business form (much less one having two portions) or any particular relationship between such a form and an identification device. The Examiner apparently contends that Appellant's bar code 7 (see office action of July 13, 2009, page 17) is a business form. Such a label is far from a business form as claimed by Petrick, which requires that the *"wireless identification device being associated with the form such that de-associating the device from the form results in at least partial destruction of the form in a manner that is readily seen through visual inspection of the form."* Appellant's claims do not mention or give a reason for any of that. Thus, Petrick's claim is non-obvious in view of Appellant's claim.

None of Petrick's other "business form" claims 2-6 add recitations that change this analysis. Nor do Appellants other apparatus claims 2-17, 38, 40-43, 45-49 claim the same apparatuses as Petrick. None of them claim the conspicuously dissassociatable form and claims 2-17, 40, 41, 43-49 require vessels with memory tags at the vessel distribution facility. Claims 38 and 42 require storage of an electronic signature, and Petrick does not claim a tag with an electronic signature.

E.2. Evaluation of Appellant's Method Claims 18-21 and 44

Petrick's Claim 8 recites:

A method of establishing a chain of custody comprising:
associating a business form and a radio frequency identification device with at least one object, said wireless identification device being associated with the form such that de-associating the device from the form results in at least partial destruction of the form in a manner that is readily seen through visual inspection of the form;
and
using both the business form and the radio frequency identification device in combination to establish a chain of custody for the object including querying said device and receiving a response that is automatically used to establish said chain of custody.

And Appellant's Claim 18 reads:

18. A method for electronically storing data on a diagnostic or toxicology specimen vessel and remotely reading data from the vessel comprising:

at a vessel distribution facility providing a plurality of biomedical specimen vessels, each having a wireless electronic memory tag directly attached thereto, with data electronically stored on the electronic memory tag including an electronic identification code stored on the electronic memory tag that is unique to the tag;

shipping members of the plurality having the electronic memory tags directly attached thereto with electronically stored data from the vessel distribution facility to a specimen collection facility; and

subsequently reading the stored data from the electronic memory tags with a non-contact electronic reader or scanner at a specimen testing laboratory facility.

E.2.(a) Assuming Petrick Is Prior Art to Appellant for 41.203(a)Test

The Examiner asserts that Appellant's Claim 18 and Petrick's Claim 8 claim the same patentable invention, but Petrick's claim does not teach or suggest Appellant's providing claimed biomedical specimen collection vessels at its claimed facilities, or storing data on a tag on a vessel at a vessel distribution facility. Nor does Petrick's claim recite collecting a specimen from

a donor as does Appellant's Claim 19, or collecting and storing an electronic signature, as do Appellant's Claim 20 and 44. Appellant's claims 19 – 21 and 44 also require vessels at the vessel distribution facility bearing tags already having a code. So, Appellant's Claims 18-21 and 44 are both new and non-obvious in view of Petrick's Claim 8. Petrick's claim 8 and dependents thereon do not teach or suggest that memory tags be on the vessels and bearing stored data at a vessel distribution facility. Petrick's discussion of its Fig. 3B teaches away from putting data on the tag of the specimen vessel at a vessel distribution facility, since adhering the seal to enclose an already-collected specimen in Petrick is the action that applies the RFID tag. This step is how Petrick provides the chain of custody claimed in claim 8 (see column 3, lines 38-49), so it cannot be omitted. So, Appellant's Claims 18-21 and 44 are new and non-obvious in view of Petrick's Claim 8. Petrick's dependent method claims 9-16 do not change the analysis.

E.2.(b) Assuming Appellant Is Prior Art to Petrick for 41.203(a)Test

None of Appellant's method claims 18-21 or 44 teach or suggest the business form or Petrick's claimed particular association between Petrick's business form and its wireless identification device *"associated with the form such that de-associating the device from the form results in at least partial destruction of the form in a manner that is readily seen through visual inspection of the form."* Appellant's claims do not disclose or give a reason to use such a business form. So, Petrick's Claim 8 and claims dependent on claim 8 are new and non-obvious from Appellant's method claims, and Appellant is not claiming the same patentable invention as the Petrick patent.

The Examiner insists that Appellant and Petrick claim the same patentable invention without showing that Petrick's claims anticipate or render Appellant's claims obvious. She

repeatedly wholesale imports the parties' specifications and derives implications from the specifications in making her analysis. She is required to limit her analysis to the claims. As this Board stated in *USV Limited, B.S.D. v State of Oregon*, Appeal Number 2009-005002, 2009 WL 2807855 at page 23 (BPAI 2009):

Here, the Examiner has failed to provide any meaningful two-way analysis that the subject matter of the Penhasi claims is directed to the same patentable invention as the claims of the 005 patent. For example, the Examiner contends that the Penhasi claims "encompass" particular limitations of the 005 patent claims as indicated by preferred ranges disclosed, but not claimed, by Penhasi. However, it is the claims of Penhasi, not preferred embodiments or preferred ranges disclosed in its specification, that are the assumed prior art for purposes of determining whether two parties are claiming the same subject matter.

Appellant is not claiming the same patentable invention as Petrick. Appellant can properly swear behind Petrick, so the rejections of Appellant's claims using Petrick as prior art should be reversed.

E.3. Responding to the Examiner's Comments

Appellant's claim 1 recites a plurality of biomedical specimen collection vessels, at least some members of the plurality being located at a vessel distribution facility, other members of the plurality being located at a specimen collection facility, further members of the plurality being located at a specimen testing laboratory facility, and additional members being transported between the facilities. Petrick's claims 1 and/or 7 do not have members of plurality s of vessels at these various facilities, particularly members at the vessel distribution facility and having the wireless tag directly attached. The Examiner asserts that the location of the claimed vessels does not bear patentable weight. As pointed out above, the Examiner is wrong in that respect, and that

may contribute to her error concerning whether or not Appellant and Petrick are claiming the same patentable invention.

On page 16 of the July 10, 2010, office action, the Examiner apparently tries to comply with the two-way test for determining whether Appellant and Petrick are claiming the same patentable invention, but she is unsuccessful. The Examiner quotes a passage from Appellant's specification, page 11. The passage that the Examiner refers to says electronic memory tag 3 can include a carrier label 4 which has a front face 5 and a rear face 6, with an identification bar code 7 on the front face. A text area can also be provided for printing, typing or writing pertinent information on the front face carrier label 4.

The Examiner's position is that this specification disclosure defines Appellant's claim to the point of causing the claim to read on that embodiment and that the subject matter disclosed in connection with Figure 2 is the same as what Petrick claims with respect to its business form. However, Petrick's business form as claimed in ALL of Petrick's claims includes two portions and a wireless identification device that is associated with a form, such that the associating the device from the form results in at least partial destruction of the form in a manner that is readily seen through a visual inspection of the form. Nothing in the passage of Appellant's specification cited by the Examiner teaches or suggests de-associating the device from the form resulting in at least partial destruction of the form in a manner that is readily seen through visual inspection of the form. The readily discernable partial destruction is a concept that is core to Petrick's claims, but totally absent from Appellant's claims (and specification for that matter). Thus, Appellant's claims cannot make Petrick's claim obvious, so different patentable inventions are being claimed, and the 1.131 declarations are to be given effect.

Later on page 16, she points out that Petrick's claim 8 recites establishing a chain of custody. From there she bootstraps that a chain of custody for a biological specimen inherently comprises distributing, transferring, and analyzing the specimen in the containers. Petrick's claim 8 does not mention any of that --- not even "biology." The phrase "chain of custody" does not necessarily imply the Examiner's phrase which is "distributing, transferring and analyzing specimen in the container at the corresponding locations," nor the specificity of Appellant's claims.

Petrick emphasizes the association of the RFID chip with the form by the fact that the chip's disassociation from the form is to be evident. This relationship of the chip to the form is fundamental to Petrick's chain of custody scheme and is a material limitation in her claims. But this fundamental relationship teaches away from Appellant's invention, in which the tag is applied to the vessel before it gets to the "collection custodian," and no form is mentioned. Thus, Appellant's claimed invention could not have been obvious from Petrick's claimed invention. The parties are claiming different inventions.

F. Claims 1, 6-7, 9, 14-15, 19, 21, 40-41 and 45-48 Are Not Anticipated by Berney.

F.1. Claims 1, 6-7, 9, 14-15, 21, and 40-41 Are Not Anticipated by Berney.

Berney discloses a system for registering useful information during analyses of blood in conventional glass test tubes 1.³ Berney's electronic memory labels 4 are attached to supports 31 that are fixed on the test tubes 1⁴ in a testing laboratory at the time of sample analysis.⁵ The

³ Col. 1, Line 11 of Berney.

⁴ Col. 2, Lines 22-24 of Berney.

⁵ Col. 1, Line 18; Col. 1, Line 36; Col. 1, Lines 64-65; Col. 2, Line 29; Col. 3, Lines 18-25; Col. 4, Line 7 of Berney (Emphasis added).

supports 31 have a spring-like shape for attaching the test tubes⁶ and rest on a base 33 including a bus system 46 for transferring information to and from the labels 4 during analysis.⁷

Berney does not disclose and is not concerned with vessels at a vessel distribution facility or a specimen collection facility. Berney's spring-like supports 31 tell one of ordinary skill in the art that the affixation to a test tube is temporary. At column 2, lines 29-30, Berney's statement that these allow a firm fixation of the label 30 onto the test tube 32 at the time of analysis clearly suggest that affixation at that time is the only time of concern to Berney. In particular, a spring-loaded mount which one of ordinary skill in the art would regard as removable and re-useable, does not suggest a chain of custody proof system.

Berney's abstract says the label is attached to the test tube with a detachable support, confirming the notion that the attachment is temporary, not the sort of affixation used to accompany a specimen collection vessel transported from a distribution facility to a collection site and then to a lab, particularly if a secure chain of custody is important. There is no teaching or suggestion supporting the Examiner's position that Berney discloses or suggests Appellant's invention.

Berney anticipates Appellant's claims only if each and every element as set forth in the claims is found either expressly or inherently described.⁸ While she acknowledged that Berney does not expressly disclose Appellant's claimed inventions, the Examiner asserted that Berney inherently discloses Appellant's claimed plurality of biomedical specimen collection vessels. But, to be inherent, the features of Appellant's claimed invention must *necessarily* be present in

⁶ Col. 2, Lines 28-30 of Berney.

⁷ Col 2, Lines 34-56, Figs. 3 and 4 of Berney.

the Berney disclosure. *In re Robertson*, 49 USPQ 2d 1950, 169 F.3d 743 (Fed. Cir. 1999).

Appellant's specified vessel locations are not even consistent with Berney's sole disclosure of laboratory use of an identification tool in, much less, *necessarily present*. Berney's label provides a temporary mount to a test tube during analysis of the test tube contents in a laboratory; only one of the three facilities described by Appellant's claims. Thus, Berney does not inherently disclose any of Appellant's Claims 1, 6-7, 9, 14-15, 19, 21, 40-41, and 45-48. The Examiner's rejections of these claims should be reversed.

The Examiner went on to observe that "the vessel distribution facility (shelves with the vessels), the specimen collection facility (a special restricted area in the laboratory) and the specimen testing laboratory can be the same place." If the claims are read in light of appellant's disclosure, the Examiner's construction is unreasonably broad. Moreover, appellant's claims 1-17, 21, 40-41 mention transporting the vessels between the claimed facilities, and the word "transporting" negates the Examiner's interpretation. It would be a very unusual way to use the English language to say "I am transporting this vessel from a shelf in the laboratory two feet to the work bench," or the like. Claim 18 uses the term "shipping," hardly an intra-lab movement. Claims 45-47 add recitations that reinforce this "not all in one lab" connotation.

F.2. Claim 19 Is Not Anticipated by Berney.

Berney describes its process of performing an analysis thusly:

[F]irstly the reference data of the patient under concern and the kind and number of analyses to be performed are fed directly from a central data base into the label. Secondly the date of analysis, the used analysis apparatus, the name of the service operator, the result

data, etc are registered. Finally all this information is transferred to the centralized data bank of the patient.⁹

Thus, Berney's labels are attached in the lab and one of ordinary skill would appreciate that the labels are also removed in the lab, so that the labels can be reused with another test tube after the information is transferred from them to a centralized data bank. There is no reason to attach electronic labels to Berney's test tubes prior to sample collection because Berney says reference data of the patient is not transferred to the labels until during the time of sample analysis.¹⁰ Thus, Berney is concerned with recording specimen analysis data, not complete chain of custody information, so Berney does not disclose electronic memory tags attached to vessels at a distribution facility, or distributing vessels having electronic memory tags to a collection facility. Therefore, Berney does not anticipate Appellant's Claim 19, and the Examiner's rejection of the claim should be reversed.

F.3. Claim 21 Is Patentable over Berney.

The Examiner rejected Claim 21 as anticipated by Berney, she also acknowledged that Berney does not disclose transporting vessels to a specimen-testing laboratory. But, she reasons, since transporting vessels is conventional medical practice, one of ordinary skill would have transported Berney's vessels, "because it allows tracking the vessels using Berney's inventive electronic tags on the specimen vessels." No, it does not. Berney does not put his clip-on identifier on the test tube until the specimen is in the lab, so it could not be useful to track the specimen at the specimen collection facility.

⁹ Col. 3, Lines 18-25.

In fact, Berney does not suggest distributing specimen collection vessels including wireless electronic memory tags to a specimen collection facility. Nor does Berney motivate one to do so. Berney is concerned with tracking information only at the lab - during the time of specimen analysis. The Examiner's rejection of Claim 21 as unpatentable over Berney should be reversed.

F.4. Claims 45-48 are patentable over Berney.

To the extent that the Examiner's interpretation of claim 1 as reading on various locations within the laboratory using Berney's invention, such an interpretation cannot be said to apply to the locations specified in claim 45 (specimen collection facility is a hospital, clinic, or doctor's office), or the remoteness of claim 46, or the shipping carton of claim 48. Further, Berney does not suggest clipping his temporary clip on an empty tube, as would be required for claim 48.

G. Claims 5, 8, and 13 and 18 Are Patentable Over Petrick or Berney in View of Leuenberger.

G.1. Claims 5 and 13 Are Patentable.

The Examiner concludes that it would have been obvious to store data including the identity of a specimen vessel and product information about the vessel on a memory tag. She said one of ordinary skill would modify Petrick to include such information 'because vessels (containers) from different suppliers may vary, and therefore such information is important for handling containers properly, and also because information on a supplier and the product is

always conventionally provided with all manufactured products, especially test tubes (vessels, containers).¹¹

Of course, Petrick is not prior art, but still, the reference fails to teach or suggest storing product information on an electronic memory tag attached to a specimen collection vessel. Petrick does not attach the RFID tag to the vessel until the sample is collected. Leuenberger says that paper labels have been used to store product information on blood packs, but that the paper labels exhibit certain disadvantages overcome by the use of microporous plastic film labels.¹² Thus, Leuenberger suggests paper or plastic film labels, but fails to suggest using an electronic memory tag to store product information. Berney discloses storing information on an electronic label in a laboratory during the time of specimen analysis. Neither Petrick, Berney or Leuenberger discloses storing product or manufacturer information on an electronic memory tag at a vessel distribution facility. Even if the Examiner were correct in asserting that product information “is always conventionally provided with all manufactured products,” that fact says nothing about storing that information *on an electronic memory tag*, as Appellant claims. To say that one of ordinary skill would have combined Petrick or Berney with Leuenberger to produce an electronic memory tag having stored thereon manufacturer or product information bridges the gap between the references by using that which Appellant teaches against its teacher.

Moreover, Petrick and Berney do not indicate that the maker of the vessel is of any concern. Petrick is all about business forms; indeed Petricks’ wireless identification device starts out associated with the form such that de-associating the device from the form results in at least partial destruction of the form in a manner that is readily seen through visual inspection of the

¹¹ Paragraph 14 of Office Action mailed July 13, 2010.

¹² Col. 1, Lines 18-55 of Leuenberger.

form. How and why one would research and record the collection vessel maker when using the Petrick business form is not at all clear from Petrick. Berney's applying his wireless device to the apparently reusable test tube certainly suggests that the original maker of the test tube is unimportant.

G.2. Claim 8 Is Patentable.

Claim 8 describes a diagnostic specimen system including a plurality of collection vessels each having attached thereto both an electronic memory tag and a label having an identifying bar code. Petrick is not prior art to Appellant's application and Berney discloses an electronic label for registering all useful information during the time of analyses of a specimen contained in a test tube. The reference does not teach or suggest a label having an identifying bar code attached to its test tubes. And, although Leuenberger discloses the use of microporous plastic film labels that may include an identifying bar code 16,¹³ one of ordinary skill would find no suggestion or motivation to add Leuenberger's bar code to the test tubes disclosed by Berney because Berney's electronic label is provided for registering such information, so there is no use for a bar code. Therefore, Appellant's claim is patentable in view of the references and the Examiner's rejection of Claim 8 should be reversed.

G.3. Claim 18 Is Patentable.

Petrick is not prior art to Appellant's application, and Berney does not disclose providing a plurality of biomedical specimen vessels that already store data on an electronic memory tag at a vessel distribution facility. Nor do the references disclose shipping members of a plurality of vessels that include electronic memory tags from a vessel distribution facility to a specimen

¹³ Col. 2, Lines 5-55 of Leuenberger.

collection facility. However one may move Berney's test tube around in his lab, that would not be "shipping," as claimed in claim 18. Thus, the references do not teach or suggest all of Appellant's claim limitations, so the Examiner's rejection of Claim 18 should be reversed. Note also that Petrick keeps the RFID tag with the paper form (see Figure 3B and the discussion at Column 5, lines 19-36) until the sample is collected and patient data is recorded on the form. Only then is the RFID chip pasted on the sample, not at a vessel distribution facility.

H. Claims 16, 17, 20, and 42-44 are patentable over Petrick or Berney in View of Hoffman or Fukuzaki.

H.1. Claims 16, 42 and 43 Are Patentable

The Examiner asserted that one of ordinary skill would have combined the electronic signature disclosed in Hoffman or Fukuzaki with Petrick's or Berney's disclosure "specifically for the reasons indicated by Hoffman and Fukuzaki, i.e. for securing electronically transferred data, and because the signature of 'the person under concern' is conventional in all diagnostic procedures."¹⁴ Petrick, however, is not prior art to Appellant's application, and Berney does not disclose members of a plurality of specimen vessels at Appellant's claimed locations (particularly the vessel distribution facility positively recited in claim 43). Berney acknowledges no specimen collection from a donor, at all. Nor is there any apparent way to store an electronic signature of the donor of a toxicology specimen on Berney's test tubes, since the tags are attached during the time of sample analysis, not at the time of specimen collection. The office action cites column 1, line 68 of Berney as being relevant, but it has no mention of a signature.

¹⁴ Paragraph 15 of Office Action mailed July 13, 2010.

Neither Hoffman nor Fukuzaki suggests including an encoded electronic signature of the donor of a toxicology specimen on an electronic memory tag. Hoffman is concerned with a method of correlative comparison of a biometrics sample for authenticating identification in a commercial transaction system. Fukuzaki discloses an electronic document security system. Neither reference teaches or suggests a specimen vessel having a memory tag containing an encoded electronic signature.

H.2. Claim 17 is Patentable

The Examiner asserts that it would have been obvious to combine Hoffman or Fukuzaki with Petrick or Berney to produce Appellant's Claim 17.¹⁵ Prior art references combined to establish obviousness, however, must yield all claim limitations.¹⁶ Appellant claims a toxicology specimen system including a plurality of specimen vessels having wireless electronic memory tags storing data including an identification code for the vessel, the identity of the supplier of the vessel and product information about the vessel. Petrick is not prior art to Appellant's application but, even so, neither Petrick nor Berney teaches or suggests all the elements of Claim 17. Hoffman is concerned with a method of correlative comparison of a biometrics sample for authenticating identification and Fukuzaki discloses an electronic document security system. Neither Hoffman nor Fukuzaki teaches or suggests a toxicology specimen system including a plurality of specimen vessels having wireless electronic memory tags storing data including an identification code for the vessel, the identity of the supplier of the vessel and product information about the vessel. Therefore, Appellant's claim would not have been obvious to one of ordinary skill and the Examiner's rejection of the claim should be reversed.

¹⁵ Paragraph 15 of Office Action mailed July 13, 2010.

¹⁶ MPEP 2143.

H.3. Claim 20 is Patentable

Petrick is not prior art to Appellant's application, and neither Berney, Hoffman, nor Fukuzaki discloses a method that includes storing the electronic signature at the specimen collection facility. Therefore, Appellant's Claim 20 would not have been obvious to one of ordinary skill in the art and the Examiner's rejection of the claim should be reversed.

H.4. Claim 44 Is Patentable Over Berney in view of Hoffman or Fukuzaki.

Berney does not disclose collecting and storing the electronic signature of a specimen donor on an electronic memory tag at a specimen collection facility. Berney does not even disclose collecting an electronic signature, much less collecting and storing one at a collection facility. The specimen donor, whose signature collection features in Claim 44, is not even present when Berney is using his clip-on test tube electronic label. Berney does not anticipate Appellant's Claim 44. And Berney is so different that regardless of what Hoffman or Fukuzaki may say about recording signatures, it would not have been obvious to do so in the context of Berney to perform the method of claim 44, so the Examiner's rejection of the claim should be reversed.

I. Claims 2 and 10 are Patentable over Berney in view of RD 421048 A.

To establish a *prima facie* case of obviousness, a combination of prior art references must provide a reason for one of ordinary skill in the art to reach the allegedly obvious claimed invention. Berney does not teach or suggest a specimen system including a plurality of vessels having members located at a vessel distribution facility, a specimen collection facility, and a specimen testing laboratory. RD 421048 A discloses a method for chemical management for tracking compounds within a chemical synthesis system including identification tags having

passive transponders.¹⁷ Modifying Berney to include RD 421048 A's passive transponders does not produce the diagnostic specimen system of Appellant's Claims 2 and 10 because RD421048 A does not disclose Appellant's claimed vessel locations. Thus, the subject matter of the claims would not have been obvious and the Examiner's rejections Berney in view of RD 421048A should be reversed.

J. Claims 3-4 and 11-12 are Patentable over Berney in View of Stevens.

The Examiner asserts that it would have been obvious "to improve Berney's container comprising the electronic tag by adding a label with a barcode and providing the same information to the electronic tag in the same way Stevens labeled his container, because this serves the same purpose that Stevens disclosed in his invention, i.e. to 'create a link between the container, the patient and the test request forms', or any other forms associated with using this container."¹⁸

Stevens discloses a sample collection tube 20 and a label 40 comprising a permanent portion 50 having a barcode 90 and a peel away portion 70 for affixation to a test request form or to another container or item.¹⁹ Berney discloses an electronic label that provides for registration of *all* useful information required for analysis of a blood sample, however, and thus *eliminates* the need for jotting down and manual transfer of information.²⁰

Therefore, combining Stevens' barcode associated with a manual entry form with Berney's disclosure would destroy Berney's purpose of eliminating manual entry of information,

¹⁷ ABSTRACT of RD 421048 A.

¹⁸ Paragraph 17 of Office Action mailed July 13, 2010.

¹⁹ Col. 5, Lines 25-27; Col. 6, Lines 19-21; Figure 8 of Stevens.

²⁰ Col. 1, Lines 30-32 of Berney.

so one of ordinary skill would not modify the references as proposed by the Examiner.²¹ Even if one were to make such a modification, the result would still not produce Appellant's claimed vessel locations. Accordingly, the obviousness rejection of each of Claims 3-4 and 11-12 is improper and should be reversed.

On page 22 of the office action of July 13, 2010, the Examiner argues that Berney does not say all useful information should be written on the electronic tags. But, Berney says his goal is "eliminating of the jotting down" at column 1, lines 31-32. If jotting is eliminated, there is no useful information left to jot.

K. Claim 38 is Patentable over Berney in View of Bowman.

The Examiner asserted it would have been obvious to modify Berney's specimen collection vessel by adding the tamper-indicating seal disclosed by Bowman "so that any attempted tampering with the specimen will be indicated by at least partial destruction of the seal."²² Berney discloses electronic memory labels for registering all useful information during blood analyses, and Bowman discloses a chain-of-custody bag 10 for the sealing a specimen within the bag during transportation to an analysis site.²³ The references show no reason to modify Berney the way the Examiner hypothesizes. Berney is not concerned with transporting vessels from a collection facility to a laboratory; everything about Berney happens in the laboratory. There is no risk of tampering that needs evidencing. Berney's test tubes are provided with caps 2 that can be removed to permit access to a blood specimen;²⁴ so adding

²¹ MPEP 2143.01(V.).

²² Paragraph 18 of Office Action mailed July 13, 2010.

²³ Col. 3, Lines 9-19 of Bowman.

²⁴ Col. 1, Line 62, Fig. 1 of Berney.

Bowman's seal to Berney's test tubes would interfere with removal of Berney's cap during specimen analysis. Therefore, the references would not have suggested such a modification,²⁵ and the Examiner's rejection of Claim 38 should be reversed.

If the Examiner's interpretation that the vessel distribution facility, specimen collection facility, and specimen testing laboratory facility are all within Berney's laboratory is accepted, there is still no reason (absent the use of hindsight) to add a tamper-evident seal. Therefore, the references would not have suggested such a modification,²⁶ and the Examiner's rejection of Claim 38 should be reversed.

L. Claim 8 is Patentable over Berney in view of RD421048 A, Stevens and Leuenberger.

The Examiner further asserts that it would have been obvious to include product information on a thrice-modified version of Berney "because, first this conventional information is always provided with the manufacture products, especially the test containers and because the identity of the supplier and the vessel may assist in the proper handling the vessel."²⁷ Neither of these proffered motives, however, explains why one would have a reason to store supplier information *on an electronic memory tag*, as Appellant claims, rather than marking the product itself, as Leuenberger suggests. Thus, they fail to address the question whether one of ordinary skill would have had a reason to combine the references to produce the *claimed invention*. Arguments made above are also applicable here. Therefore, the Examiner has failed to present a

²⁵ MPEP 2143.01(V.).

²⁶ MPEP 2143.01(V.).

²⁷ Paragraph 19 of Office Action mailed October 11, 2011.

prima facie case of obviousness with respect to Claim 8, and the rejection of this claim should be reversed.

M. Claim 17 is Patentable over Berney in View of RD 421048 A, Stevens, Leuenberger and Hoffman or Fukuzaki.

The Examiner asserts that one of ordinary skill would have combined the encoded electronic signature of Hoffman or Fukuzaki with a thrice-modified version of Berney to produce Appellant's claimed invention that includes storing various items of information, including the specimen donor's signature.²⁸ Berney, however, discloses logging information concerning the person under concern only in a specimen analysis laboratory not the specimen collection facility where the donor may be asked to sign. Neither Hoffman nor Fukuzaki suggest storing a signature on an electronic memory tag. Also, Hoffman is concerned with a method of correlative comparison of a biometrics sample for authenticating identification and Fukuzaki discloses an electronic document security system. Neither reference teaches or suggests a specimen vessel having a memory tag containing an encoded electronic signature. Therefore, the Examiner's rejection of Claim 17 should be reversed.

²⁸ Paragraph 20 of Office Action mailed July 13, 2010.

N. Claims 1-4, 6-7, 9-12, 14-15, 19, 21, 38, 40-41 and 45-49 are patentable over Stevens in view of Moore, ‘Barcodes 2D or RFID?’” December 1999, *Parcel Industry*.

This rejection was first made by the Examiner in the office action October 11, 2011. The Examiner had cited the Stevens reference initially in an office action on January 16, 2003. The Moore reference is newly cited on October 11, 2011.

The Stevens reference teaches the use of a label on a test tube in which the label is separable into a permanent sticker for the test tube and a removable sticker to go onto lab paperwork, with a common barcode appearing on both the permanent sticker and the removable paperwork sticker.

The Moore reference discloses a discussion in the parcel shipping industry of whether RFID tags might be useful in that industry and discusses their pros and cons with respect to barcodes.

The office action rejected the claims as being directed to an invention that would have been obvious to one of ordinary skill in the art by substituting or adding the RFID chip discussed in Moore and the label of Stevens. This rejection is obviously improper as being based upon the application of hindsight, particularly hindsight gathered from some nine years of office actions and aborted appeals of this application.

Appellants initially filed an information disclosure statement including a publication by Texas Instruments, Inc. called “*Tag-It-Moving Concepts to Reality*.” A copy is attached as part of the Evidence Appendix. The Examiner indicated in the office action which she first cited the Stevens reference that she also considered the Tag-It publication. The Tag-It publication’s fifth page includes a discussion of applications of RFID technology and logistics automation, and the sixth page includes a reference to use of RFID in express parcel tracking. The parcel depicted on

that page also includes a barcode. Thus, in 2003, when the Examiner first considered this application, she saw the Stevens reference and the disclosure in the Texas Instrument, Inc. publication that had a disclosure on a par with the disclosure of the Moore article, yet made no rejection. There were some **nine office actions and five Examiner's answers** filed in this case before the Examiner decided that a teaching such as Moore's (which is cumulative to the Texas Instruments, Inc. teaching) and the teaching such as Stevens provides a basis for a rejection. If the combination had been obvious to those of ordinary skill at the time of Appellants' invention, that fact would have been apparent over 8 years before the Examiner first made this rejection. The Examiner's own actions show that the rejection is only the application of impermissible hindsight.

Looking at the Moore reference itself, it is very equivocal as to the advisability to the use of RFID for parcel shipments. Furthermore, the rejection of the claims based upon Stevens in view of Moore requires that one disregard many features of the Stevens disclosure. Stevens clearly teaches those of ordinary skill in the art that a paper document needs to be transmitted along with the test tube that has a bar code label on it. Stevens goes to great detail to discuss the nature of the perforations between the permanent and the removable bar code labels in order to provide advantages in test tube handling (see, for example, Stevens' paragraph 35). Those of ordinary skill in the art upon reading Moore and Stevens in the year 2000 would not have said "Oh! We should replace or add to Stevens's barcode labels with an RFID tag." Stevens is solely concerned with making sure that the barcode on the test tube matches the bar code on the paperwork and focusses his disclosure on improved ways to do that. In light of the speculative and tentative recommendation of the Moore publication to use RFID or barcodes in the parcel

shipping industry, it would not have been obvious to use them on specimen collection containers, which are much more individualized and personal in use.

O. Claims 16, 17, 20, and 42-44 are patentable over Stevens in view of Moore in View of Hoffman or Fukuzaki.

O.1. Claims 16, 42 and 43 Are Patentable

The Examiner asserted that one of ordinary skill would have combined the electronic signature disclosed in Hoffman or Fukuzaki with Stevens in view of Moore disclosure “specifically for the reasons indicated by Hoffman and Fukuzaki, i.e. for securing electronically transferred data, and because the signature of ‘the person under concern’ is conventional in all diagnostic procedures.”²⁹ Stevens in view of Moore does not disclose members of a plurality of specimen vessels at Appellant’s claimed locations (particularly the vessel distribution facility positively recited in claim 43). Nor is there any apparent way to store an electronic signature of the donor of a toxicology specimen on Stevens’s test tubes.

Neither Hoffman nor Fukuzaki suggests including an encoded electronic signature of the donor of a toxicology specimen on an electronic memory tag. Hoffman is concerned with a method of correlative comparison of a biometrics sample for authenticating identification in a commercial transaction system. Fukuzaki discloses an electronic document security system. Neither reference teaches or suggests a specimen vessel having a memory tag containing an encoded electronic signature.

²⁹ Paragraph 15 of Office Action mailed July 13, 2010.

O.2. Claim 17 is Patentable

The Examiner asserts that it would have been obvious to combine Hoffman or Fukuzaki with Stevens in view of Moore to produce Appellant's Claim 17.³⁰ Prior art references combined to establish obviousness, however, must yield all claim limitations.³¹ Appellant claims a toxicology specimen system including a plurality of specimen vessels having wireless electronic memory tags storing data including an identification code for the vessel, the identity of the supplier of the vessel and product information about the vessel. Neither Stevens nor Moore teaches or suggests all the elements of Claim 17. Hoffman is concerned with a method of correlative comparison of a biometrics sample for authenticating identification and Fukuzaki discloses an electronic document security system. Neither Hoffman nor Fukuzaki teaches or suggests a toxicology specimen system including a plurality of specimen vessels having wireless electronic memory tags storing data including an identification code for the vessel, the identity of the supplier of the vessel and product information about the vessel. Therefore, Appellant's claim would not have been obvious to one of ordinary skill and the Examiner's rejection of the claim should be reversed.

O.3. Claim 20 is Patentable

Neither Stevens in view of Moore, Hoffman, nor Fukuzaki discloses a method that includes storing the electronic signature at the specimen collection facility. Therefore, Appellant's Claim 20 would not have been obvious to one of ordinary skill in the art and the Examiner's rejection of the claim should be reversed.

³⁰ Paragraph 15 of Office Action mailed July 13, 2010.

³¹ MPEP 2143.

O.4. Claim 44 Is Patentable Over Stevens in view of Moore in view of Hoffman or Fukuzaki.

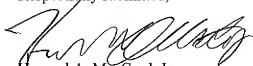
Stevens in view of Moore does not disclose collecting and storing the electronic signature of a specimen donor on an electronic memory tag at a specimen collection facility. Stevens in view of Moore does not even disclose collecting an electronic signature, much less collecting and storing one at a collection facility. Stevens in view of Moore is so different that regardless of what Hoffman or Fukuzaki may say about recording signatures, it would not have been obvious to do so in the context of Stevens in view of Moore to perform the method of claim 44, so the Examiner's rejection of the claim should be reversed.

Conclusion

The Examiner's rejections of the Claims should be reversed.

In conclusion, the rejections err in numerous ways, as outlined above. Fundamentally, the Examiner disregards the material recitations of the locations of the various members of the pluralities of vessels. Those are not arbitrary locations, but are there because of the progression of the members of the plurality from one location to the other during processing. At any point in time, some members will be at each location. Once the locations are given their proper weight, (and even if they are not) it is clear that Appellant and Petrick are not claiming the same invention, so that Appellant can successfully swear behind Petrick. Moreover, the Berney reference teaches only the use of a tag within a laboratory, and not among the various facilities of Appellant's invention. All of the rejections should be reversed and the claims allowed.

Respectfully submitted,



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8. Claims Appendix

The appealed claims are as follows:

1. A diagnostic specimen system comprising a plurality of biomedical specimen collection vessels, at least some members of the plurality being located at a vessel distribution facility, other members of the plurality being located at a specimen collection facility, further members of the plurality being located at a specimen testing laboratory facility, and additional members of the plurality being transported between the facilities,

wherein each of the collection vessels includes a wireless electronic memory tag, a unique electronic identification code stored on the electronic memory tag for non-contact storage and retrieval of information directly attached thereto such that the tag remains directly attached to the vessel at the facilities and as the vessel is transported between facilities.

2. A diagnostic specimen system as claimed in claim 1 wherein each electronic memory tag includes a radio frequency transponder.

3. A diagnostic specimen system as claimed in claim 1 wherein each electronic memory tag contains stored data including an identification code for the vessel.

4. A diagnostic specimen system as claimed in claim 3 further including a label imprinted with a bar code attached to each vessel, the bar code identifying the vessel.

5. A diagnostic specimen system as claimed in claim 1 wherein each electronic memory tag contains stored data including the identity of a supplier of the vessel and product information about the vessel.

6. A diagnostic specimen system as claimed in claim 1 wherein electronic memory tags on vessels at the specimen collection facility contain stored data including identifying information about a specimen contained in the vessel and about the specimen donor.

7. A diagnostic specimen system as claimed in claim 6 wherein an electronic memory tag on a vessel at the specimen collection facility contains stored data further including definition of the analytical tests to be performed on the specimen in the vessel.

8. A diagnostic specimen system comprising:

a plurality of collection vessels, at least some members of the plurality being located at a vessel distribution facility, other members of the plurality being located at a specimen collection facility, further members of the plurality being located at a specimen testing laboratory facility, and additional members being transported between the facilities,

wherein each of the collection vessels includes a wireless electronic memory tag, with a unique electronic identification code stored on the electronic memory tag for non-contact storage and retrieval of information directly attached thereto such that the tag remains directly attached to the vessel at the facilities and as the vessel is transported between facilities;

data stored on electronic memory tags of members at the specimen collection facility including an identification code for the vessel to which the tag is directly attached, the identity of

the supplier of the vessel and product information about the vessel, identifying information about a specimen contained in the vessel and about the specimen donor, and definition of the analytical tests to be performed on the specimen in the vessel; and

a label imprinted with an identifying bar code attached to each vessel.

9. A toxicology specimen system comprising

a plurality of collection vessels, each configured to receive and contain a toxicology specimen and having a wireless electronic memory tag directly attached to the vessel for non-contact storage and retrieval of information,

wherein the plurality includes members located at a vessel distribution facility, other members of the plurality being located at a specimen collection facility, further members of the plurality being located at a specimen testing laboratory, and additional members being transported between the facilities,

wherein each of the collection vessels includes a wireless electronic memory tag, with a unique electronic identification code stored on the electronic memory tag for non-contact storage and retrieval of information directly attached thereto such that the tag remains directly attached to the vessel at the facilities and as the vessel is transported between facilities.

10. A toxicology specimen system as claimed in claim 9 wherein each electronic memory tag includes a radio frequency transponder.

11. A toxicology specimen system as claimed in claim 9 wherein each electronic memory tag contains stored data including an identification code for the vessel.

12. A toxicology specimen system as claimed in claim 11 further including a label imprinted with an identifying bar code attached to each vessel.

13. A toxicology specimen system as claimed in claim 9 wherein each electronic memory tag contains stored data including the identity of the supplier of the vessel and product information about the vessel.

14. A toxicology specimen system as claimed in claim 9 wherein electronic memory tags on vessels at the specimen collection facility contain stored data including identifying information about a specimen contained in the vessel and about the specimen donor.

15. A toxicology specimen system as claimed in claim 14 wherein an electronic memory tag on a vessel at the specimen collection facility contains stored data further including definition of the analytical tests to be performed on the specimen in the vessel.

16. A toxicology specimen system as claimed in claim 9 wherein an electronic memory tag contains stored data including an encoded electronic signature of the donor of a toxicology specimen.

17. A toxicology specimen system comprising:

a plurality of biomedical specimen collection vessels, wherein the plurality includes members located at a vessel distribution facility, other members of the plurality being located at a specimen collection facility, further members of the plurality being located at a specimen testing laboratory facility, and additional members of the plurality being transported between the facilities,

each vessel having a wireless electronic memory tag directly attached to the vessel such that the tag remains directly attached to the vessel at the facilities and as the vessel is transported between facilities, the electronic memory tag including a radio frequency transponder for non-contact storage and retrieval of information; data stored on the electronic memory tags including an identification code for the vessel that is unique to the tag on the vessel, the identity of the supplier of the vessel and product information about the vessel, identifying information about a specimen contained in the vessel and about the specimen donor, definition of the analytical tests to be performed on the specimen in the vessel, and an encoded electronic signature of the donor of the toxicology specimen in the vessel; and a label imprinted with an identifying bar code attached to each vessel.

18. A method for electronically storing data on a diagnostic or toxicology specimen vessel and remotely reading data from the vessel comprising:

at a vessel distribution facility providing a plurality of biomedical specimen vessels, each having a wireless electronic memory tag directly attached thereto, with data electronically stored on the electronic memory tag including an electronic identification code stored on the electronic memory tag that is unique to the tag;

shipping members of the plurality having the electronic memory tags directly attached thereto with electronically stored data from the vessel distribution facility to a specimen collection facility; and

subsequently reading the stored data from the electronic memory tags with a non-contact electronic reader or scanner at a specimen testing laboratory facility.

19. A method for recording information about a diagnostic or toxicology specimen on a diagnostic or toxicology specimen vessel comprising:

at a vessel distribution facility providing a plurality of biomedical specimen vessels, each having a wireless electronic memory tag directly attached to the vessel, with a unique electronic identification code stored on the electronic memory tag;

distributing plurality members including the wireless electronic memory tag directly attached thereto to specimen collection facilities;

collecting a specimen from a donor in the specimen vessel at one of the specimen collection facilities; and

electronically storing information about the specimen, donor, and/or tests to be performed

on the specimen on the electronic memory tag at the specimen collection facility

at which the specimen is collected.

20. A method as claimed in claim 19 further including collecting and storing an electronic signature of the specimen donor on the electronic memory tag at the specimen collection facility at which the specimen is collected.

21. A method as claimed in claim 19 further including transporting the member vessel with collected specimen from the specimen collection facility to a specimen testing laboratory and storing the results of the analytical tests performed on the specimen in the vessel on the electronic memory tag at the specimen testing laboratory.

22. – 37. (Canceled).

38. A toxicology specimen system comprising
a collection vessel configured to receive and contain a toxicology specimen,
a tamper-indicating seal, and
wireless electronic memory tag directly attached to the vessel such that the tag remains directly attached to the vessel as the vessel is transported, the tag providing non-contact storage and retrieval of information and wherein the electronic memory tag contains stored data including an encoded electronic signature of the donor of a toxicology specimen and a unique electronic identification code stored on the electronic memory tag.

39. (Canceled).

40. A diagnostic specimen system as claimed in claim 1 further including an electronic database accessible from the specimen collection facility for storing data entered at the collection facility.

41. A diagnostic specimen system as claimed in claim 40 further including an electronic network connecting the specimen collection facility to the specimen testing laboratory facility for transmitting data from the specimen collection facility to the specimen testing laboratory facility.

42. A toxicology specimen system comprising
a plurality of collection vessels,
each member of the plurality of collection vessels configured to receive and contain a toxicology specimen and having a wireless electronic memory tag directly attached to the vessel for non-contact storage and retrieval of information, the memory tag containing a unique electronic identification code stored on the electronic memory tag and stored data including an encoded electronic signature of the donor of a toxicology specimen,

wherein the plurality includes a member at a specimen collection facility and a member at a specimen testing laboratory facility and

wherein the members are transportable between the facilities and the tag is directly attached to the vessel such that it remains directly attached to the vessel at the facilities and as the vessel is transported between facilities.

43. A toxicology specimen system comprising:
a biomedical specimen collection vessel and a tamper-indicating, wireless electronic memory tag having a unique electronic identification code stored on the electronic memory tag, the tag being directly attached to the vessel such that the tag remains directly attached to the vessel as the vessel is shipped to and among a vessel distribution facility, a specimen collection

facility, and a specimen testing laboratory facility, the tag including a radio frequency transponder for non-contact storage and retrieval of information;

data stored on the electronic memory tag including an identification code for the vessel, the identity of the supplier of the vessel and product information about the vessel, the tag configured to receive identifying information about a specimen contained in the vessel and about the specimen donor, definition of the analytical tests to be performed on the specimen in the vessel, and an encoded electronic signature of the donor of the toxicology specimen in the vessel; and

a label imprinted with an identifying bar code.

44. A method for recording information about a diagnostic or toxicology specimen on a diagnostic or toxicology specimen vessel comprising:

providing a plurality of biomedical specimen vessels, each of the specimen vessels having a wireless electronic memory tag directly attached to the specimen vessel, wherein the plurality includes a member at a vessel distribution facility, a member at a specimen collection facility, and a member at a specimen testing laboratory facility, and wherein each of the vessels includes a wireless electronic memory tag with a unique electronic identification code stored on the electronic memory tag directly attached thereto such that the tag remains directly attached to the vessel at the facilities and as the vessel is transported between facilities;

collecting a specimen from a donor in a specimen vessel at the specimen collection facility;

electronically storing information about the specimen, donor, and/or tests to be performed on the specimen on the electronic memory tag attached to the vessel into which the specimen is collected at the specimen collection facility including the electronic signature of the specimen donor.

45. A diagnostic specimen system as claimed in claim 1 wherein the specimen collection facility is selected from the group consisting of hospitals, clinics, doctors' offices and combinations thereof.

46. A diagnostic specimen system as claimed in claim 1 wherein the specimen collection facility and specimen testing laboratory facility are remote from one another so that members of the plurality at the specimen collection facility being transported to the specimen testing laboratory facility are couriered from the specimen collection facility to the specimen testing laboratory facility.

47. A diagnostic specimen system as claimed in claim 1 wherein the specimen collection facility and specimen testing laboratory facility are remote from one another so that members of the plurality at the specimen collection facility being transported to the specimen testing laboratory facility travel in a shipping carton.

48. A diagnostic specimen system as claimed in claim 1 wherein none of the members of the plurality located at the vessel distribution facility contain specimens and some of the

members of the plurality located at the specimen collection facility and specimen testing laboratory facility contain specimens.

49. A plurality of biomedical specimen collection vessels comprising plurality members located at a vessel distribution facility, plurality members located at a specimen collection facility, and plurality members located at a specimen testing laboratory facility, wherein each vessel of the plurality has a wireless electronic memory tag directly attached to the vessel, the electronic memory tag including a radio frequency transponder for non-contact storage and retrieval of information. wherein data stored on the electronic memory tags of all of the plurality members includes a unique identification code for the vessel, wherein data stored on the electronic memory tags of the plurality members located at the specimen collection facility and specimen testing laboratory facility includes identifying information about a specimen contained in the vessel and about the specimen donor, and an encoded electronic signature of the donor of the toxicology specimen in the vessel, but the data stored on the electronic memory tags of the plurality members located at the vessel distribution facility does not include identifying information about a specimen contained in the vessel, nor information about the specimen donor, nor an encoded electronic signature of the donor of the toxicology specimen in the vessel.

9. Evidence Appendix

A. These references were cited by the Examiner in making rejections, and Appellant relies on portion of them to show the errors of the rejections. Copies are attached.

Patent Number or Document Number	1st Named Inventor	Examiner Cited in Office Action Dated
6,535,129	Petrick	13 July 2010
5,613,012	Hoffman	13 July 2010
5,777,303	Berney	13 July 2010
5,135,313	Bowman	13 July 2010
EP 1,004,359 A2	Stevens	13 July 2010
5,314,421	Leuenberger	13 July 2010
RD 421048 A		13 July 2010
5,948,103	Fukuzaki	13 July 2010

B. Additional evidence submitted by Appellant.

Declarations under Rule 1.131 of Jason Bowman, Danny Charles Bowman and David Michael Lewis, and Exhibits thereto. Copies are attached. Entered June 17, 2004.

Exhibit A: Claims from 18 patents reciting the location of an article of manufacture. Entered June 8, 2010.

Texas Instruments Brochure entitled "*Tag-It-Moving Concepts to Reality*" Copyright 2000. This was prior art submitted by Appellants January 4, 2001 and acknowledged as considered by the Examiner in an office action dated January 16, 2003.

10. Related Proceedings

This application was previously the subject of Appeal no. 2009-2011, which was remanded to the Examiner for further work on April 20, 2009. Appellant chose to reopen prosecution, but the Examiner re-sent the case to the Board, where it was assigned Appeal number 2009-014382.

Appellant sought remand for consideration of arguments presented and Appeal number 2009-014382 was dismissed by a paper mailed January 26, 2010.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: **Danny Charles Bowman**

Serial No.: 09/737,185

Examiner: Gakh

Filed: December 14, 2000

Art Unit: 1743

For: **PAPERLESS CHAIN OF CUSTODY EVIDENCE FOR LAB SAMPLES**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

DECLARATION UNDER RULE 1.131

DANNY CHARLES BOWMAN does hereby say as follows:

1. Richard Kimberly Paisley is one of the inventors of the above-identified patent application.
2. Richard Kimberly Paisley assigned the above-identified patent application to GBF, Inc.
3. I am an officer of GBF, Inc.
4. Richard Kimberly Paisley is unavailable to GBF, Inc. to provide a Declaration Under Rule 1.131.
5. I am one of the inventors of the above-identified patent application.
6. I have attached copies of evidence that the above-identified patent application was conceived in the United States or a NAFTA country before November 17, 2000 and applicants were diligent to a constructive redirection to practice from a time prior to November 17, 2000, until December 14, 2000. Dates not specified herein have been redacted but were prior to November 17, 2000:

a. a draft of the application for the PAPERLESS CHAIN OF CUSTODY FOR LAB SAMPLES was developed with the assistance of applicants' lawyers by a date prior to November 17, 2000, and a copy is the attached Exhibit A;

b. a final draft with formal documents for signature was forwarded by counsel on December 5, 2000;

c. The inventors reviewed and approved the application for filing, and the formal documents accompanying the application were signed December 11, 2000, and forwarded to counsel for filing in the PTO on December 14, 2000.

d. from the period beginning at the latest when the "final draft" of the application was developed prior to November 17, 2000 until December 14, 2000, when the application was filed, the inventors of the subject matter of the PAPERLESS CHAIN OF CUSTODY FOR LAB SAMPLES proceeded diligently in all matters regarding the filing of the application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and such willful false statements may jeopardize the validity of the application or any patent issued thereon.


Dauny Charles Bowman

6-15-04
Date

*** TX REPORT ***

TRANSMISSION OK

TX/RX NO	0061
CONNECTION TEL	820*2552*011*6650209
SUBADDRESS	
CONNECTION ID	
ST. TIME	11/09 14:28
USAGE T	13'17
PGS. SENT	32
RESULT	OK

Rhodes & Mason

ATTORNEYS AT LAW

A Professional Limited Liability Company

C. ROBERT RHODES
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HOWARD A. MACCORD, JR.
JACK B. HICKS
WILLIAM J. MASON
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JEFFREY R. MCFADDEN
BENJAMIN S. WITHROW
GILBERT J. ANDIA, JR.
STANISLAV ANTOLIN
AMY H. FIX
LEWIS S. ROWELL
KIMBERLY BULLOCK GATLING
CRAIG H. POPALIS

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Of Counsel:

JOSEPH W. MOSS
MATTHEW L. MASON

Other Offices:
Research Triangle, NC
Wilmington, NC

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TELEFAX COVER SHEET

TO:
Mr. Danny Bowman

FROM:
Art MacCord

ORGANIZATION/FIRM:
GBF, Inc.

DATE:
November 9, 2000

FAX NUMBER:
(336) 665-0209

RECIPIENT'S PHONE NUMBER:
(336) 665-0205

TOTAL # OF PAGES
(Including Cover): 31

YOUR E-MAIL ADDRESS:
amaccord@rhodesmason.com

RE:

Paperless Chain of Custody Evidence for Lab Samples

EXHIBIT A -

Rhodes & Mason

ATTORNEYS AT LAW

A Professional Limited Liability Company

C. ROBERT RHODES
EDWARD W. RILEE
HOWARD A. MACCORD, JR.
JACK B. HICKS
WILLIAM J. MASON
JAMES L. LESTER
JEFFREY R. MCPADDEN
BENJAMIN S. WITHROW
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MATTHEW L. MASON

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Research Triangle, NC
Wilmington, NC

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☐ Hand Delivery
☐ Without Enclosures

☐ Will Not Follow

- ☐ Courier
☐ With Enclosures
☐ International Airmail

TELEFAX COVER SHEET

TO:	FROM:
Mr. Danny Bowman	Art MacCord
ORGANIZATION/FIRM:	DATE:
GBF, Inc.	November 9, 2000
FAX NUMBER:	RECIPIENT'S PHONE NUMBER:
(336) 665-0209	(336) 665-0205
TOTAL # OF PAGES	YOUR E-MAIL ADDRESS:
(Including Cover): 31	amaccord@rhodesmason.com
RE:	
Paperless Chain of Custody Evidence for Lab Samples	

NOTES/COMMENTS:

Confidentiality Notice

The information contained in this fax transmittal is privileged and confidential, intended for the addressee only. If you are neither the intended recipient nor the employee or agent responsible for delivering this message to the intended recipient, any disclosure of this information in any way or taking of any action in reliance on this information is strictly prohibited. If you have received this fax in error, please notify the person transmitting the information immediately.

Christian Carter

Telefax Operator

Rhodes & Mason

ATTORNEYS AT LAW

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C. ROBERT RHODES
EDWARD W. RILEE
HOWARD A. MacCORD, JR.
JACK B. HICKS
WILLIAM J. MASON
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Of Counsel:

JOSEPH W. MOSS
MATTHEW L. MASON

Other Offices:

Research Triangle, NC
Wilmington, NC

via fax

November 9, 2000

Mr. Danny Bowman
GBF, Inc.
P. O. Box 18744
Greensboro, NC 27419

Re: **Paperless Chain of Custody Evidence for Lab Samples**
Our File No. 2552-011

Dear Danny:

Enclosed is a final draft of the subject patent application. Please review the application and provide your comments. Also, I left a voice-mail message today requesting identification of the inventors of your invention. Once we have your comments and the names and addresses of the inventors, we will prepare the necessary documents for submittal of your application to the PTO.

Sincerely,



Art MacCord

HAM/CHP/cc

Rhodes & Mason

ATTORNEYS AT LAW

A Professional Limited Liability Company

C. ROBERT RHODES
EDWARD W. RILEE
HOWARD A. MacCORD, JR.
JACK B. HICKS
WILLIAM J. MASON
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Of Counsel:

JOSEPH W. MOSS
MATTHEW L. MASON

Other Offices:
Research Triangle, NC
Wilmington, NC

December 5, 2000

Mr. Danny Bowman
GBF, Inc.
410-J Gallimore Dairy Road
P.O. Box 18744
Greensboro, NC 27419

Re: **Patent Application for PAPERLESS CHAIN OF
CUSTODY EVIDENCE FOR LAB SAMPLES**
Our File No. 2552-011

Dear Danny:

Enclosed is the above-identified utility patent application, including Inventor's Declaration; drawings; Assignment; Power of Attorney; and Small Entity Form, which are ready for signature.

The inventors should carefully review the text, Inventor's Declaration, drawings and Assignment. If any minor changes need to be made, they may be made in permanent ink with the inventors' initials and the date in the adjacent margin. No changes may be made once the application has been signed. If major changes are needed, please mark up the application as needed and return it to me for preparation of a freshly printed text.

Once the application is in good form, please sign and date at all places marked with a red "x." Have an officer of the company review and sign the Power of Attorney. After signing and dating, please return all of the application papers to us for filing with the Patent and Trademark Office (PTO).

Exhibit B

Mr. Danny Bowman
December 5, 2000
Page Two

Also enclosed is an Important Legal Notice, which briefly describes the Duty of Candor owed to the PTO by patent applicants. If it suggests anything that needs to be submitted to the PTO that I don't already know about, please let me know.

I appreciate your allowing us to be of service to you.

Sincerely,



Art MacCord

AM/CHP/cc/lis
Enclosures

IMPORTANT INFORMATION FOR PATENT APPLICANTS

To: Inventors

Subject: The Requirements of United States Patent Law

ALL OF US INVOLVED WITH THIS APPLICATION ARE CHARGED WITH A DUTY OF CANDOR AND GOOD FAITH TOWARD THE PATENT EXAMINER. This means we must comply with regulations which require us to disclose all material information we are aware of having a bearing on the patentability of your invention.

INFORMATION IS MATERIAL IF IT, BY ITSELF OR WITH ANOTHER ITEM OF INFORMATION, DISCLOSES OR SUGGESTS THE INVENTION OR IS OTHERWISE INCONSISTENT WITH STATEMENTS WE ARE MAKING TO THE PATENT OFFICE. Information such as prior art having a bearing on the patentability of your claimed invention would therefore be material. Prior art may include:

- a) articles, patents, product announcements, technical reports, lectures or other material of others which might be considered as pertaining to your invention published prior to your date of invention;
- b) any public use or demonstration of your invention or of apparatus or methods which might be considered as pertaining to your invention more than one year before your application is filed;
- c) any sale or offer for sale of products incorporating your invention or made by its use more than one year before your application is filed;
- d) any commercial machine or product of which your invention is an improvement;
- e) any pertinent prior work of others (except fellow employees) of which you have knowledge.

IT IS ESSENTIAL THAT ALL ITEMS NOTED ABOVE, AS WELL AS ANY OTHER INFORMATION YOU BELIEVE MAY HAVE A BEARING ON THE NEWNESS OR OBVIOUSNESS OF THE CLAIMED INVENTION, BE BROUGHT TO OUR ATTENTION PROMPTLY. We can review the information to determine if the law requires its disclosure to the Patent Examiner. In this manner, you can satisfy your duty of disclosure and we can insure that all material information is disclosed to the U.S. Patent and Trademark Office. This also works to the patent owner's benefit because a more thoroughly examined patent is less subject to attack later on.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Danny Charles Bowman

Serial No.: 09/737,185

Examiner: Gakh

Filed: December 14, 2000

Art Unit: 1743

For: **PAPERLESS CHAIN OF CUSTODY EVIDENCE FOR LAB SAMPLES**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

DECLARATION UNDER RULE 1.131

JASON BOWMAN does hereby say as follows:

1. I am one of the inventors of the above-identified patent application.
2. I have attached copies of evidence that the above-identified patent application was conceived in the United States or a NAFTA country before November 17, 2000 and applicants were diligent to a constructive redirection to practice from a time prior to November 17, 2000, until December 14, 2000. Dates not specified herein have been redacted but were prior to November 17, 2000:
 - a. a draft of the application for the PAPERLESS CHAIN OF CUSTODY FOR LAB SAMPLES was developed with the assistance of applicants' lawyers by a date prior to November 17, 2000, and a copy is the attached Exhibit A;
 - b. a final draft with formal documents for signature was forwarded by counsel on December 5, 2000;
 - c. The inventors reviewed and approved the application for filing, and the formal documents accompanying the application were signed December 11, 2000, and forwarded to counsel for filing in the PTO on December 14, 2000.

d. from the period beginning at the latest when the "final draft" of the application was developed prior to November 17, 2000 until December 14, 2000, when the application was filed, the inventors of the subject matter of the PAPERLESS CHAIN OF CUSTODY FOR LAB SAMPLES proceeded diligently in all matters regarding the filing of the application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and such willful false statements may jeopardize the validity of the application or any patent issued thereon.



Jason Bowman

6/2/2004

Date



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Danny Charles Bowman

Serial No.: 09/737,185

Examiner: Gakh

Filed: December 14, 2000

Art Unit: 1743

For: **PAPERLESS CHAIN OF CUSTODY EVIDENCE FOR LAB SAMPLES**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

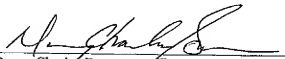
DECLARATION UNDER RULE 1.131

DANNY CHARLES BOWMAN does hereby say as follows:

1. I am one of the inventors of the above-identified patent application.
2. I have attached copies of evidence that the above-identified patent application was conceived in the United States or a NAFTA country before November 17, 2000 and applicants were diligent to a constructive redirection to practice from a time prior to November 17, 2000, until December 14, 2000. Dates not specified herein have been redacted but were prior to November 17, 2000:
 - a. a draft of the application for the PAPERLESS CHAIN OF CUSTODY FOR LAB SAMPLES was developed with the assistance of applicants' lawyers by a date prior to November 17, 2000, and a copy is the attached Exhibit A;
 - b. a final draft with formal documents for signature was forwarded by counsel on December 5, 2000;
 - c. The inventors reviewed and approved the application for filing, and the formal documents accompanying the application were signed December 11, 2000, and forwarded to counsel for filing in the PTO on December 14, 2000.

d. from the period beginning at the latest when the "final draft" of the application was developed prior to November 17, 2000 until December 14, 2000, when the application was filed, the inventors of the subject matter of the PAPERLESS CHAIN OF CUSTODY FOR LAB SAMPLES proceeded diligently in all matters regarding the filing of the application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and such willful false statements may jeopardize the validity of the application or any patent issued thereon.



Danny Charles Bowman

6/01/04

Date



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Danny Charles Bowman

Serial No.: 09/737,185

Examiner: Gakh

Filed: December 14, 2000

Art Unit: 1743

For: **PAPERLESS CHAIN OF CUSTODY EVIDENCE FOR LAB SAMPLES**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

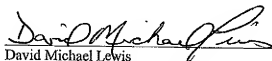
DECLARATION UNDER RULE 1.131

DAVID MICHAEL LEWIS does hereby say as follows:

1. I am one of the inventors of the above-identified patent application.
2. I have attached copies of evidence that the above-identified patent application was conceived in the United States or a NAFTA country before November 17, 2000 and applicants were diligent to a constructive redirection to practice from a time prior to November 17, 2000, until December 14, 2000. Dates not specified herein have been redacted but were prior to November 17, 2000:
 - a. a draft of the application for the PAPERLESS CHAIN OF CUSTODY FOR LAB SAMPLES was developed with the assistance of applicants' lawyers by a date prior to November 17, 2000, and a copy is the attached Exhibit A;
 - b. a final draft with formal documents for signature was forwarded by counsel on December 5, 2000;
 - c. The inventors reviewed and approved the application for filing, and the formal documents accompanying the application were signed December 11, 2000, and forwarded to counsel for filing in the PTO on December 14, 2000.

d. from the period beginning at the latest when the "final draft" of the application was developed prior to November 17, 2000 until December 14, 2000, when the application was filed, the inventors of the subject matter of the PAPERLESS CHAIN OF CUSTODY FOR LAB SAMPLES proceeded diligently in all matters regarding the filing of the application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and such willful false statements may jeopardize the validity of the application or any patent issued thereon.


David Michael Lewis

Date

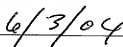


Exhibit A

Claims from 18 patents where the location of an article of manufacture or component thereof is mentioned in a claim

These first two patents are added to the list in June 2010:

U.S. Patent No. 7,546,252 Approach for managing rental items across a plurality of distribution locations *Assignee: Netflix, Inc.*

1. A method for managing digital versatile discs (DVDs) carrying movies in distribution locations, the method comprising the machine-implemented steps of:

identifying a first set of one or more DVDs **located** at a first distribution **location**, wherein the first set of one or more DVDs carry a first set of movies that has not been requested for rent by rental customers associated with the first distribution **location**;

causing the first set of one or more DVDs to be sent from the first distribution **location** to a designated distribution **location**;

identifying a second set of one or more DVDs **located** at a second distribution **location**, wherein the second set of DVDs carry a second set of movies that has not been requested for rent by rental customers associated with the second distribution **location**; and

causing the second set of one or more DVDs to be sent from the second distribution **location** to the designated distribution **location**, wherein the first, second and designated distribution **locations** are distinct distribution **locations**.

U.S. Patent No. 7,490,766 Apparatus and methods for monitoring transfusion of blood *Assignee: Neotevic*

1. A method for recording an audit trail for a blood transfusion, said method comprising the steps of:

(a) allocating from a supply of blood, a blood transfusion unit for a patient wherein the blood transfusion unit is marked with an identifying code;

(b) labeling the blood transfusion unit with a compatibility level having patient identification information and said blood transfusion unit identifying code;

(c) generating a blood request form for the patient, the blood request including patient identification information;

(d) placing the blood unit in a secured **location** for collection by a person authorized to collect said blood transfusion unit;

- (e) recording on the blood request form for said patient (i) identification information for said authorized person collecting said blood transfusion unit, (ii) the time of collection, and (iii) the patient identification information;
- (f) providing the patient with a wristband having patient identification information;
- (g) recording identification information for the person performing a blood transfusion for said patient;
- (h) recording the patient identification information on the patient wristband;
- (i) recording the patient identification information on the compatibility label;
- (j) recording the blood unit identification code on the compatibility label;
- (k) recording the blood unit identification code on the blood unit;
- (l) comparing the patient identification information on the patient wristband with the patient identification information on the compatibility label, and recording the results of the comparison;
- (m) comparing the blood unit identification code on the compatibility label and the blood unit identification code on the blood unit and recording the result of the comparison;
- (n) recording the time at which the blood unit is transfused;
- (o) comparing the time of transfusion to the time the blood unit was collected from the secured **location** and calculating the time elapsed between the time of transfusion and the time of collection from said secured **location**; and
- (p) providing a warning if the elapsed time is greater than a pre-set limit.

United States Patent
Miller, et al.

5,468,462
November 21, 1995

Geographically distributed tritium extraction plant and process for producing detritiated heavy water using combined electrolysis and catalytic exchange processes

20. An apparatus *located* at geographically separated remote and central sites for detritiating heavy water comprising:
at the remote site,
a combined electrolysis and catalytic exchange (CECE) plant and hydriding unit, said CECE plant with remote isotope exchange column, remote electrolysis unit, and remote recombiner

unit, said CECE plant having means for receiving tritium rich heavy water at a feed point intermediate the top and bottom of the remote isotope exchange column, having means for further enriching tritium relative to deuterium in said tritium rich heavy water below said feed point by an isotope exchange reaction over a wet-proofed catalyst from tritium rich DT/D.sub.2 gas flowing countercurrent to said heavy water, having means for passing said tritium rich heavy water to the remote electrolysis unit to form said tritium rich D¹/D.sub.2 gas, having means for providing the remaining portion of said tritium rich DT/D.sub.2 gas to said hydriding unit to form a hydride of said tritium rich DT/D.sub.2 gas for transportation, and a portion of said tritium rich DT/D.sub.2 gas to the bottom of the remote isotope exchange column to provide countercurrent flow to said heavy water, having means for passing tritium lean DT/D.sub.2 gas from the top of said remote isotope exchange column to the remote recombiner unit to form tritium lean heavy water, having means for passing a portion of the tritium lean heavy water to the top of the remote isotope exchange column for the isotope exchange reaction and having means for removing the remaining portion of tritium lean heavy water from the remote CECE plant;

means for transporting said hydride of said tritium rich DT/D.sub.2 gas to the central site; and at the central site, a de-hydriding unit, a cryogenic distillation plant and a central CECE plant, the de-hydriding unit having means for re-forming said tritium rich DT/D.sub.2 gas and means for passing said tritium rich DT/D.sub.2 gas to the cryogenic distillation plant, the cryogenic distillation plant having means for receiving said DT/D.sub.2 gas from the de-hydriding unit, means for forming tritium gas from the tritium rich DT/D.sub.2 and means for passing the remaining tritium-lean DT/D.sub.2 gas to the central CECE plant, said central CECE plant having a central isotope exchange column, central electrolysis unit, and central recombiner unit, the central CECE plant having means for receiving tritiated heavy water from a central reactor at a feed point in the central isotope exchange column, the central combined electrolysis and catalytic exchange plant having means for receiving tritium-lean DT/D.sub.2 gas from the cryogenic distillation plant at a feed point intermediate the top and bottom of the central isotope exchange column, having means for further enriching tritium relative to deuterium in said tritium rich heavy water below said feed point by an isotope exchange reaction over a wet-proofed catalyst from tritium rich DT/D.sub.2 gas flowing countercurrent to said heavy water, having means for passing said tritium rich heavy water to the central electrolysis unit to form said tritium rich DT/D.sub.2 gas, having means for providing a portion of said tritium rich DT/D.sub.2 gas to the cryogenic distillation plant and the remaining portion of said tritium rich DT/D.sub.2 gas to said isotope exchange column to provide countercurrent flow to said heavy water, having means for passing tritium lean DT/D.sub.2 gas from the top of said central isotope exchange column to the central recombiner unit to form tritium lean heavy water, having means for passing a portion of the tritium lean heavy water to the top of the central isotope exchange column for the isotope exchange reaction and having means for transporting the remaining portion of the tritium lean heavy water back to the remote site.

System and method for creating personalized image collections from multiple locations by using a communication network

1. An apparatus for use in image collection at a plurality of geographically diverse locations comprising:

a plurality of image capture means, each being *located* at one of the plurality of geographically diverse locations;

image recording means;

a plurality of detecting means, each of said detecting means (i) having a detection range, (ii) being *located* substantially at one of the plurality of geographically diverse locations and being associated with at least one of said image capture means *located* at the same location and (iii) being responsive to the presence, within said detection range, of any guest, of a plurality of guests that are each individually identifiable, to generate an indication that indicates which at least one of said guests is presently to be found within said detection range at the one of the plurality of geographically diverse locations;

a communications network through which said plurality of image capture means and said plurality of detecting means communicate to control means, the control means being responsive to each indication generated by any of said plurality of detecting means for operating said communications network and said plurality of image capture means in such a way that (i) images from each of said at least one image capture means associated with each of said plurality of detecting means generating an indication are recorded, and (ii) said recorded images are segregable by the identity of each of said identifiable guests.

Article tracking system and method

28. A system for tracking articles, managing articles, or both, wherein RFID tags are associated with the articles, comprising: at least one RFID tag associated with an article, said RFID tag including an electronic memory containing information relating to the article and an antenna coupled to the electronic memory for transmitting and/or receiving information-bearing signals in an RFID tag format, wherein the information-bearing signals represent information to be stored in the electronic memory and/or represent information produced from the electronic memory; wherein the information relating to the article stored in the RFID tag is erasable and the RFID tag is re-encodable; at least one bar code associated with the article, the bar code containing information relating to the article that is stored in the electronic memory of the RFID tag and the electronic memory of the RFID tag containing the information that is encoded in the bar code; a first station comprising a first RFID reader for transmitting and/or receiving information-bearing signals in the RFID tag format via a plurality of antennas defining detection regions proximate said first station, wherein ones of said plurality of antennas are *located* proximate a warehouse, a manufacturing facility, a processing facility, a display, a display rack, a shelf, a storage area, a storage bin, an entrance, an exit, an access way, a transport operation, a vehicle, an airplane, a ship, a train, a truck, a container, a storage container, a transport container, a crate, a package, a pallet, a wholesale operation, a check out, a dispensing location, a retail operation, a store, a display facility, or any combination of the foregoing, wherein antennas of the plurality of antennas are sequenced in time at a rate sufficient for receiving information-bearing signals transmitted by an RFID tag within the time that the RFID tag is within the detection region thereof irrespective of the orientation of the RFID tag; a processor including a database; means for communicating information contained in the received information-bearing signals from RFID tags in the detection regions of said first RFID reader to the database of said processor, whereby information is communicated between the electronic memory of RFID tags and the processor via the RFID tag readers of the first station when the RFID tags are in the detection regions thereof; said processor storing in the database thereof at least information contained in the received information-bearing signals, wherein the information stored in the database of said processor includes information relating to the articles; and said processor processing information from the data base thereof for utilizing articles in an order relating to degradation, expiration and/or spoilage of the articles, whereby information stored in the database may be accessed for dispensing articles on a first-in first-out or other basis to reduce spoilage and the RFID tags may be reprogrammed.

Baseball batter training system

1. A system for training a batter to automatically swing at pitched balls corresponding to strikes and to refrain from swinging at pitched balls not corresponding to strikes, the system comprising a visual reference member suspended between a pitcher's mound and a home plate where the batter is located, at a *location* in front of the plate, so that the trajectory of a pitch from a pitcher's release point proximate the pitcher's mound to a point in a strike zone proximate the home plate consistently passes through a portion of the visual reference member, wherein the visual reference member comprises a hoop section having an upper portion missing to define an open upper end between a pair of exposed ends of the hoop, with a surface of the hoop facing the batter having alternating light and dark bands, with the exposed ends representing two of the dark bands, and the system further includes a pair of light-colored supports located to suspend the hoop above the ground, with the supports extending from the exposed ends of the hoop at an angle of from about 40 to about 50 degrees, wherein when a pitched ball corresponding to a strike passes through a predetermined portion of the hoop the user visually completes the broken image provided by the alternating dark/light bands of the hoop and the supports to yield a cone-shaped zone within the hoop.

2. A method for training a batter to automatically swing at pitched balls corresponding to strikes and to refrain from swinging at pitched balls not corresponding to strikes, the method comprising the steps of providing a visual reference member and *locating* the visual reference member between a pitcher's mound and a home plate where the batter is located, at a *location* in front of the plate, so that the trajectory of a pitch from a pitcher's release point proximate the pitcher's mound to a point in a strike zone proximate the home plate consistently passes through a portion of the visual reference member; and repeatedly pitching balls along the path toward a batter adjacent the second *location*, wherein the step of providing a visual reference member comprises providing a hoop section having an upper portion missing to define an open upper end having a pair of exposed ends, with a surface of the hoop facing the batter having alternating light and dark bands, with the exposed ends representing two of the dark bands, and also providing a pair of light-colored supports and suspending the hoop above the ground at a first *location*, with the supports extending from the exposed ends of the hoop at an angle of from about 40 to about 50 degrees, wherein when a pitched ball corresponding to a strike passes through the hoop at the first *location* the user visually completes the broken image provided by the alternating dark/light bands of the hoop and the supports to yield a cone-shaped zone within the hoop.

Generating and dynamically updating databases of WIFI hotspots locations and performance metrics via location mappers

1. In a data processing system, a method comprising: receiving from a remote device a dual transmission hotspot operability/availability transmission (HOT), which includes an identification (ID) of a currently operating and available hotspot, substantially current operating parameters and performance metrics of the hotspot, and a GPS (global positional signal) coordinate of the hotspot, wherein said HOT comprises a first transmission comprising the hotspot's ID and operating parameters and performance metrics and a second transmission comprising the GPS *location* of the hotspot; storing the HOT as an entry within a hotspot *locating* database (HLD) comprising multiple entries of HOTs accessible by received user queries, wherein said storing includes: determining geographic *location* parameters corresponding to the received GPS coordinate, said geographic *location* parameters comprising at least a physical address; correlating the HOT with the geographic *location* parameters; and storing the HOT with the geographic *location* parameters; receiving a request from a user searching for hotspots within a particular geographic *location*; determining which acceptable entries of the multiple entries within the HLD have geographic *location* parameters in proximity to the particular geographic *location*; and providing an output of the acceptable entries to the user, wherein said determining includes: parsing the request for specific performance metrics desired by the user to be available within hotspots returned in response to the request, said specific performance metrics provided by the user within the request; comparing the specific performance metrics to the performance characteristics provided within the each entry of the HLD that are in proximity to the particular geographical *location*; and identifying those entries meeting the metrics desired and existing within proximity to the particular geographical *location* as the acceptable entries; wherein the operating parameters and performance metrics comprise a plurality characteristics from among: identification (ID) of the hotspot; name of the hotspot service provider/vendor; cost associated with accessing the hotspot; availability of the hotspot, including general total uptime and periods of availability for access; bandwidth of the wireless link to the hotspot; estimated bandwidth of the link from the hotspot to the background network; average time to establish a connection to the hotspot, guaranteed minimum download speed and minimum upload speed; maximum, minimum and average latency added by the hotspot link; accessibility range of the hotspot; wireless signal attenuation characteristics exhibited by the hotspot; overall quality of service (QoS) of the hotspot, determined utilizing parameters that define the quality, strength, and usability of the hotspot; overall historical and current user rating of the hotspot; enabling a first user interface within which a user may enter said request, said user interface accessible via an Internet connection to the data processing system; wherein said receiving of the request occurs when the user enters and submits the request within the user interface; wherein said providing provides said output via a graphical display associated with said user interface, and wherein for each presented hotspot, said output comprises one or more of a street address, driving directions from an origination point entered by the user within the request, and, when graphics output is support by the user interface, a map of the *location* of the hotspot; providing a second user interface within which a user may subscribe to become a HOT

location mapper; and registering said user with a user account having a number of hotspots that are mapped and provided by the user via a user device, wherein said number of hotspots is tracked and compared to pre-set threshold numbers linked to predetermined incentives provided to the user when the number of hotspots reaches the particular pre-set threshold numbers.

Managed traverse system and method to acquire accurate survey data in absence of precise GPS data

1. A method of determining the *location* of a target with survey grade precision in a zone where survey-grade precision cannot be achieved using satellite signals, comprising: defining at least one fixed reference point; *locating* a fixed starting point outside the zone using satellite signals to obtain the *location* thereof; determining the *location* of said fixed reference point using range and bearing information relative to said fixed starting point; traversing from said fixed starting point to the target using a tracking method within the zone that does not use satellite signals for determining locations along the traverse and is subject to the accumulation of tracking errors; and reducing accumulating tracking errors by determining locations along the traverse using range and bearing information relative to said at least one fixed reference point; and using said tracking method to determine the *location* of the target with survey grade precision.
2. The method according to claim 1, wherein the step of *locating* a fixed starting point outside the zone comprises using a receiver for a global navigation satellite system.
3. A method for determining the *location* of a target within a zone in which satellite signals are ineffective for obtaining error-free *location*, the method comprising the steps of: defining at least one fixed *location* outside the zone; determining the *location* of at least one fixed reference point using range and bearing information relative to said at least one fixed *location*; manipulating a positioning system subject to accumulative errors in determining *location* along a traverse of the zone to the target; using said positioning system periodically along the traverse to obtain range and bearing information relative to at least one of a fixed reference point and a fixed *location*; using said range and bearing information relative to at least one of a fixed reference point and fixed *location* to reduce accumulated errors of said positioning system and using said position system to determine the *location* of the target.

Can filling system to prevent damage to cans

1. A can filling device for minimizing damage to cans during filling comprising:

rotating filler wheel means for transporting said cans in a substantially horizontal, circular path;

filler wheel pocket means having upper and lower pocket portions for engaging said cans at substantially vertically displaced upper and lower portions of said cans at in a manner sufficient to maintain said cans in a substantially vertical orientation during movement in said path around said rotating filler-wheel means;

star wheel means for transporting said cans to said rotating filler wheel means;

star wheel pocket means for transferring said cans to said upper and lower pocket portions of said filler wheel pocket means, said star wheel pocket means being shaped to provide sufficient clearance in a tangential direction relative to said substantially circular path of the filler wheel means to prevent damage to said cans during transfer from said star wheel pocket means to said filler wheel pocket means;

locator brush means adjacent to the *location* where said cans were transferred from said star wheel pocket means to said filler wheel pocket means for *locating* said cans in the proper relationship with said filler wheel pocket means prior to being filled by engaging said cans at a *location* between said upper and lower pocket portions to force said cans in a radially inward direction relative to said substantially circular path against both said upper and lower pocket portions of said filler wheel pocket means; and

means for moving filler units for filling said cans over the tops of said cans while said cans are in contact with said locator brush means to substantially prevent damage to the tops of said cans.

Transfer mechanism

1. For a transport system wherein a conveying means is provided for carrying thereon an article from at least one *location* therealong to a second *location* therealong, an improved device for removing an article from said conveying means at said second *location* to an adjacent work station comprising:

A. a first platform located below said conveying means;

B. means for raising said first platform a vertical height sufficient to raise an article residing on said first platform above and out of contact with the conveying means;

C. a second platform located on approximately the same horizontal plane as the first platform and between said first platform and the work station;

D. means for raising said second platform a vertical height approximately equal to the vertical height of said first platform when said first platform is in a raised position;

E. belt means forming a closed loop and located above and below said first and second platforms such that when said platforms are in their raised positions, said belt means is in contact with the upper surface of each platform and in further contact with the article to be conveyed; and

F. a fluid driven cylinder located below said first and second platforms functionally connected to said belt means such that when said first and second platforms are raised said belt means moves said article toward or away from said adjacent work station in a direction substantially opposite to the direction of travel of the fluid driven cylinder.

Passenger aerial cableway

1. A method of loading passenger carrying vehicles of an aerial cableway comprising:

transporting a plurality of passenger carrying vehicles, including the chair or gondola portions thereof, along a single travel path from a loading station to an unloading station along transport and return runs,

providing at least first and second loading areas at the loading station, spaced apart longitudinally along the single travel path of said vehicles,

passing each vehicle by each of said at least first and second loading areas successively,

marking each loading area for queuing skiers awaiting a vehicle into a plurality of separate lanes, the number of lanes corresponding to the number of passengers transported by each vehicle, each lane terminating at a *location* adjacent said travel path without interference with the vehicle,

displaying a GO signal for each said lane,

controlling the display of the GO signals for the lanes of each of the loading areas, so that before each vehicle travels past the loading areas the GO signals for only one loading area are activated, the display of the GO signals for the lanes of each loading areas being activated by the arrival of a vehicle at a predetermined *location* only one time out of the number of loading areas, whereby successive vehicles are loaded at successive loading areas, such as one at the first loading areas and the next at the second loading area in the case of two loading areas.

Tooling system for remote load positioning

1. A tooling system for transporting a load to a target from a remote position, comprising:

a support frame adapted to be rigidly mounted at the remote position;

an elongated track supported at the upper end by the frame and the other end adapted to extend beyond the target;

a trolley mounted on the track and freely moveable under the influence of gravity on said track section;

a drum assembly carried by said trolley, said drum assembly including a load drum having diameter D.sub.1 and a larger control drum having a diameter D.sub.2, said load drum and control drum connected to turn as a unit; a load support line wound on the load drum at one end and having means at the other end for connection to the load;

a control line affixed to and wound on the control drum in a direction opposite to said support line winding, the number of wraps of control line being equal to or greater than the number of revolutions of the load drum required to move the load between its final position on the target and the carrying position under the trolley, when the load drum is directly above the target;

winch means operable from the remote position, for selectively drawing the control line toward or paying out the control line from the remote *location*;

restraint means carried by the track for stopping the trolley directly over the target;

whereby the load is transported up or down the inclined track while remaining in a vertical attitude such that when positioned over the target the load moves vertically with respect to the trolley, the transport and vertical movement being responsive to said single control line.

Location apparatus

1. *Location* apparatus for use in making a saw cut in a workpiece and comprising, in combination, a base on which the workpiece is placed, at least one saw guide member mounted on said base to define a saw blade guide plane at a predetermined setting to the plane of said base, said saw guide member comprising a pair of elements extending vertically from the base at a spacing from each other to provide an upwardly open gap for the insertion and removal of a saw blade, a side face of one of said elements forming an abutment face for the saw blade and said other element comprising means for resiliently urging the saw blade against said face while yet enabling insertion and removal of the saw blade through said upwardly open gap, a series of fixed locations being provided at spaced positions on said base, a plurality of *location* elements being selectively engageable with respective ones of said locations for defining a series of different and predetermined angular settings for the workpiece relative the saw guide plane permitting correspondingly oriented saw cuts to be made in said workpiece, guide means on said base extending from adjacent said at least one saw guide member transversely to said guide plane, and transverse position *location* means displaceably guided by said guide means for providing a *location* for the workpiece in said direction transverse the saw guide plane.

Method and apparatus for removing non-rectified capsules from a capsule rectification and transport device

4. In a capsule rectification and transport device, wherein said capsules are caused to travel from an upstream *location* to a downstream *location* and wherein said capsules comprise body portions and enlarged cap portions, the combination comprising, hopper means into which a multiplicity of capsules are to be loaded, an endless conveyor, transport means for receiving said capsules from said hopper and for transporting them in a downstream direction along a predetermined path to said endless conveyor, rectification means disposed adjacent to said transport means for rectifying substantially all of said capsules into dispositions in which said cap portions of said rectified capsules lie along one side of a predetermined path and in which said body portions of said rectified capsules lie on the opposite side of said predetermined path, whereby occasionally appearing non-rectified capsules continue to travel on said transport means, and non-rectified capsule removal means located downstream from said rectification means for removing said occasionally appearing non-rectified capsules from said predetermined path, said removal means being positioned adjacent said predetermined path for contacting said non-rectified capsules as they are carried along said predetermined path, and said removal means comprising engagement means physically structured for grasping the non-rectified capsules and being shaped in such a manner so as to grasp only non-rectified capsules while not being capable of grasping rectified capsules, said removal means having capacity for removing said non-rectified capsules from said path, and means provided for removing said non-rectified capsules from said removal means.

Onshore/offshore method and apparatus for drilling

1. An independent and portable offshore drilling structure adapted to perform drilling operations comprising:

a jack-up drilling platform including a plurality of self-contained jack-up means comprising jack-up platform support legs for removably engaging the ocean floor, and being the sole support means for supporting said platform above the water surface during drilling operations, at least some of said jacking means being mounted in sliding engagement to said drilling platform side to enable said slidable jacking means, and jack-up legs therewith, to move from an outboard *location* when supporting said drilling platform above the water surface to a *location* inboard in order to nest said jacking means to a tender vessel while in transit to enable said platform to pass through narrow waterways; and a jacking mechanism for raising and lowering all of said legs relative to said platform;

a drilling rig mounted on said platform for drilling holes in the ocean floor; and

a vessel for supporting said drilling platform and drilling rig, transporting said platform about and for use as a tender during drilling operations.

Protective shroud for offshore oil wells

1. An oil rig instrumentality comprising a protective shroud member comprising a generally cylindrically shaped structure of a length sufficient to extend from the bottom of a body of water and out of the water at the surface, and of sufficient diameter to encompass an oil wellhead and attendant rigging servicing an underwater well, said structure having near its bottom in a position assuming an underwater *location* above and near the bottom of said body of water a plurality of pumping means distributed about the circumference of said structure for pumping liquids with said pumps coupled to water jet structure outside the cylinder, and including control means individually controlling operation of each of said pumping means, thereby to provide controlled water jet motive forces for moving said structure relative to said bottom of the body of water.

Method of and an arrangement for longwall mining

1. In a method of longwall mining, the steps of removing material from a longwall mining face; transporting the removed material in the condition in which it was removed from the face and in dry state, in direction rearwardly away from the face; comminuting the transported material to obtain particles of a predetermined size; admitting the particles into a bunker at a pick-up *location* remote from the mine face; discharging the particles from the bunker into a hydraulic fluid so as to entrain and convey the particles from the pick-up *location* to a separating *location*; separating the particles at the separating *location* from the hydraulic fluid; and recirculating the separated hydraulic fluid back to the pick-up *location* for entrainment of additional particles thereat.

24. An arrangement for longwall mining, comprising means for removing material to be excavated from a longwall mining face; means for transporting the removed material in the condition in which it was removed from the face and in dry state, in direction rearwardly away from the face; means for comminuting the transported material to obtain particles of predetermined size; means for admitting the particles into a bunker at a pick-up *location* remote from the mine face; means for discharging the particles from the bunker into a hydraulic fluid so as to entrain and convey the particles from said pick-up *location* through conduit means to a separating *location*; means for separating the entrained particles from the hydraulic fluid at said separating *location*; and means for recirculating the separated hydraulic fluid back to said pick-up *location* for entrainment of additional particles thereat.

Offshore pipeline electrical survey method and apparatus

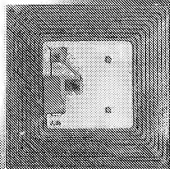
1. An apparatus for making offshore structure electrical surveys comprising reference electrode means in the environment proximate the structure, transport means to carry said reference electrode means along the length of the structure in close proximity to the structure, said transport means including a boat and said reference electrode means being towed behind said boat, a supply of flexible, small gauge, disposable elongate electrically conductive insulated magnet wire means carried by said boat for electrically and mechanically connecting the apparatus with the structure at a reference *location* thereon, meter means electrically connected to said wire means and electrode means for indicating the potential difference between said reference electrode means and said electrically conductive magnet wire means, and means driven by said electrically conductive magnet wire means for measuring the length of said electrically conductive magnet wire means as it is played out from the apparatus as it is carried by said transport means whereby the structure-to-environment potential difference may be determined at measured distances along the length of the structure.

11. A method for making offshore structure electrical surveys comprising the steps of:

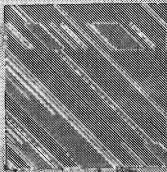
- (a) initially *locating* the structure to be surveyed,
- (b) traversing the length of the previously located structure towing behind a boat a reference electrode in close proximity to the structure,
- (c) carrying on the boat a supply of, small gauge, disposable elongate electrical insulated magnet wire conductor,
- (d) electrically connecting the conductor to the structure at a reference *location*,
- (e) playing out the conductor from the boat along the length of the structure while transporting the supply of the conductor and towing the reference electrode behind the boat,
- (f) measuring and recording the potential difference between the reference electrode and conductor at spaced test locations along the length of the structure, and
- (g) determining the position of such test locations relative to the pipe.

Tag-it™ —

Moving Concepts to Reality



Higher Level of



We're Linking Advanced Information Technology

To Creative Business Solutions

Across the world, highly sophisticated data-management systems track inventory, control quality, automate accounting, and try to keep track of the fast-moving business world. These systems rely on accurate data collection—not always possible with manual approaches, or even barcode systems.

A breakthrough in radio frequency identification (RFID) called "smart labels" is delivering dramatically higher levels of performance in automatic identification and tracking.

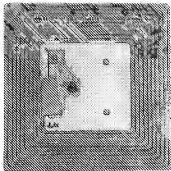
Tag-it™ smart labels are a part of the application-proven Texas Instruments RFID family of products that offer state-of-the-art solutions for automatic data collection.

Making Labels Smart

Data collection made fast and error-free.

Tag-it™ smart labels from Texas Instruments bring affordable RFID technology to a wide range of new applications. Providing a wireless link between products and information management systems, the consumable Tag-it™ transponder consists of an integrated circuit and an antenna. It has no battery. When energized by radio signals from a fixed-position reader or handheld scanner, it returns stored data.

Tag-it™ smart labels are read/write, allowing users to re-program individual pages of memory many times. The ultra-thin transponder can be easily laminated between layers of paper or plastic for integration with existing labeling systems, including standard barcode printers and scanners.



Advanced features make Tag-it the smart choice for developers.

For developers of identification systems, the Tag-it family of RFID components offers the advantages of an industry-leading technology that provides cost-effective solutions for many applications. Features, such as simultaneous identification, make Tag-it ideal for RFID innovations in a wide variety of markets.

Exciting new uses are now possible, such as tracking goods throughout their assembly and distribution cycles. High-volume applications that can benefit from the technology include rapid parcel delivery, airline baggage tracking, and access control. In addition, since counterfeiters find replication of these devices difficult, smart labels can aid in helping purchasers identify genuine merchandise.

Tag-it identification integrates seamlessly with existing information management systems and can coexist with other forms of data capture such as barcode.

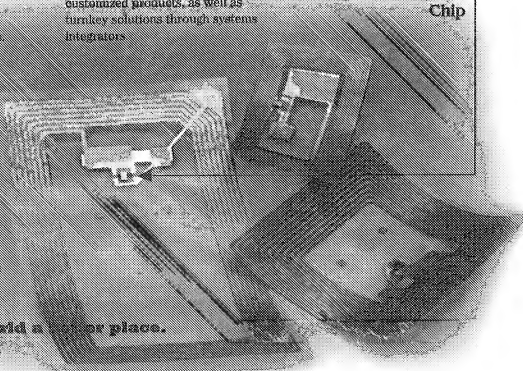
Read/write modules are compact and can communicate with Tag-it transponders without contact, simplifying the automation process.

TI's strength in chip design, digital technology, and volume manufacturing benefits Tag-it products and customers. End users can rely on TI strategic partnerships for the delivery of customized products, as well as turnkey solutions through systems integrators.

**Label Communicates
Through Specially
Designed Computer
Chip**

Helping to make the world a better place.

The materials used in Tag-it transponders are environmentally friendly and can be easily disposed of using conventional techniques.



Explore The Possibilities . . .

Measurable Advantages

Faster, More
Reliable Scans

+

Less Shrinkage

+

Better Asset
Utilization

+

Brand Protection

=

Cost

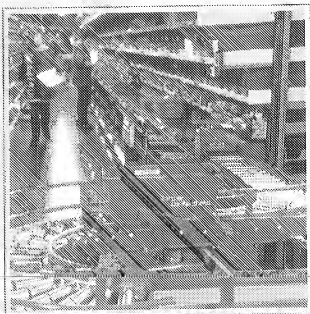
Unlike barcodes, the innovative RFID transponder inlays used in Tag-it smart labels can be read without line-of-sight and in any orientation. Smart labels are ideally suited for applications in harsh environments, such as under conditions of extreme temperature, or where dirt and moisture are prevalent. With their read/write capability, the inlays provide for a two-way exchange of information with reader modules, allowing users to update the data stored in the smart label's memory anywhere along its movement. The reader can also rapidly and simultaneously identify numerous smart labels in the antenna's field—an important step forward in RFID technology.

Data collected from smart labels can be sent to a host computer through standard interfaces or can be stored in a portable scanner for uploading later. Since the Tag-it transponders respond only to signals from the Tag-it reader, they can co-exist with other RFID systems.

... And Discover The Rewards

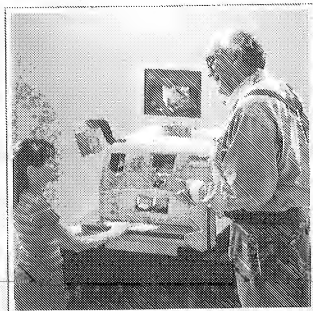
Reliable, cost-effective and informative, proven RFID technology provides the dependability needed for high-volume scanning applications and eliminates the need for manual sorting, recording, and checking. Labor and error costs are reduced. Throughput is increased.

Managers gain the ability to make better decisions based upon complete and up-to-date information.



Logistics Automation

RFID technology can connect all phases of the supply chain, from resourcing and manufacturing to inventory control and distribution. Today, advanced data management systems are in use around the world, improving these and a variety of other vital business functions. RFID provides the ideal enhancement to these systems, adding a new level of sophistication to the speed and reliability of data capture. Tag-it can provide an economical method of tracking individual items without contact, through all stages of manufacture, distribution, and after sales support—even disposal and recycling. It simplifies warehousing, provides flexibility for mixed consignments, and assists in accountability transfers.

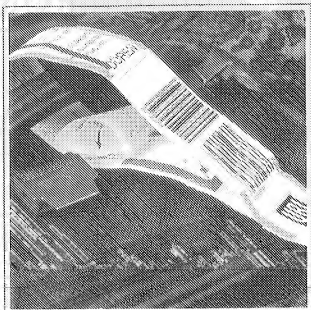


Library Materials Management

Based on TI's Tag-it RFID technology, the AM™ Digital Identification System is being used by libraries to streamline the flow of books and other materials, as well as reduce losses. Items are identified with Tag-it smart labels carrying a unique, tamper-proof identification code. Librarians and patrons use the AM™ SelfCheck™ System that reads the smart labels to check items in and out. The process is faster and more accurate than with traditional optical barcode labels.

Besides the unique identification number, the labels can be programmed with additional information, such as type of media and storage location. Since the labels are rewritable, they don't have to be replaced when updating an item's circulation status or flagging a book for reservation. The main goal of libraries is to improve service to their patrons by improving inventory management. They are also finding new ways to take advantage of tagged items, such as gathering statistics on items used most often and quickly scanning shelves for misplaced books. Their conclusion, RFID tracking greatly improves materials management and optimizes resources.

ng Life Easier, Safer, and M



Airline Baggage Identification

The airline industry constantly struggles to successfully deliver each bag to each traveler's destination. In spite of the use of modern technology, last year millions of bags were lost, or delivered late—costing the industry billions of dollars. Problems like this have encouraged airlines to look for new solutions, such as smart labels, to make dramatic improvements in baggage deliveries.

As Tag-it labeled suitcases pass through an airport's baggage handling system, the sorting and tracking computers read each bag's information and flight details with almost 100% accuracy, regardless of the orientation of the bags or the speed of the conveyor. Extreme environmental conditions have no adverse effects on Tag-it smart labels. They can tolerate complete immersion in water and continue to function with the same high degree of accuracy.

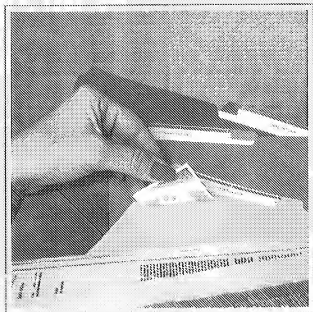
Smart labels also make it feasible to offer home baggage check-in, collection from railways, and dynamic baggage rerouting. Fast, dependable baggage sorting, fewer delays, reduced insurance claims—it's a low-cost way of increasing customer satisfaction while improving profitability.



Express Parcel Tracking

For express parcel delivery firms, Tag-it helps automate the sizable task of real-time record keeping. Leading label converters who serve this industry have integrated smart labels into standard label stock. When the parcel label is loaded to a printer, the smart label is programmed with pertinent information such as tracking number, sender/receiver, and final destination. It also carries a barcode and human-readable information. As the package travels through the delivery process, stationary or handheld scanners can track it. Labels can be updated at any point; parcels can be rerouted while in transit; and multiple packages can be read at conveyor speeds of up to two meters per second. The ability of RFID to reliably read multiple parcels simultaneously results in unprecedented throughput while dramatically cutting handling costs.

More Efficient for Millions of People



Document Management

The loss of important document files in paper-intensive businesses such as medicine, law, and insurance can cause severe problems. RFID can be used to improve the management of documents so that files can be quickly located and document workflow easily tracked.

Each file is tagged with a smart label containing a unique ID. The file description and tracking number are entered into a database. The file can be assigned a variety of parameters, such as expiration date, permitted movement, and access authorization. Over time, the database builds an audit trail of the handling and workflow history of each document file. Employees can locate a file by entering a request in their desktop PC or searching with a handheld scanner. This approach greatly reduces the time now wasted searching for a document.

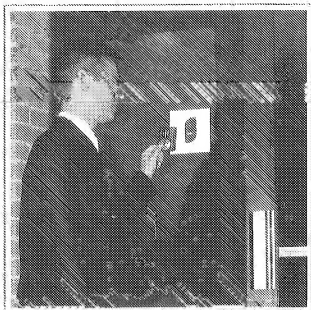


Product Authentication and Brand Protection

As trade expands worldwide, counterfeiting, diversion, organized fraud, and tax avoidance are on the increase. With web marketplaces exploding and the expansion of business-to-business e-commerce, the problem will get worse. Combating these problems effectively requires identification technology that is cost-effective to use, yet prohibitively expensive to copy. Smart labels are used in the manufacturing of expensive branded merchandise, where they are embedded directly into products such as clothing and designer goods. Once a smart label is included in an item, it not only provides absolute authentication from manufacturing to retail, but can also be updated with shipping and sales information and other useful data.

Smart labels are also embedded in items like printer ink cartridges to ensure that only the correct consumable replacements are used in equipment.

round the World



Access Control

RFID technology is answering the challenge of providing high-level security and access control, while minimizing inconvenience for authorized personnel. Companies in the security field are incorporating Texas Instruments RFID into systems for perimeter protection and control at entries and exits. Transponders can be laminated into employee badges with readers mounted at doors or inside of walls. Doors and gates unlock only in response to a valid authorization number.



Ski Lift Passes

Ski resorts are using smart label technology in lift tickets and passes. They not only authenticate the ticket as genuine and valid for that date and time, but also increase the traffic-flow rate on the lifts since passes can be read on the fly. The reader signals if there is a problem with a particular ticket. Skiers pass quickly through lift gates without having to remove their gloves to swipe a card, making their experience more pleasurable.

Developing Smart Systems

Integrates into a wide choice of options to design an automatic data collection system based on Tag-it technology. The Series 6000 Reader System includes several models that support high performance and long read range capability. These readers can be used in fixed configurations, for example, to scan items moving along conveyors at high speeds. Reader products can be purchased as boards or as fully housed units.

The S6000 Reader System communicates with Tag-it smart labels and passes that data through standard interfaces to a host computer, programmable logic controller, or other intelligent device for processing.



System Software

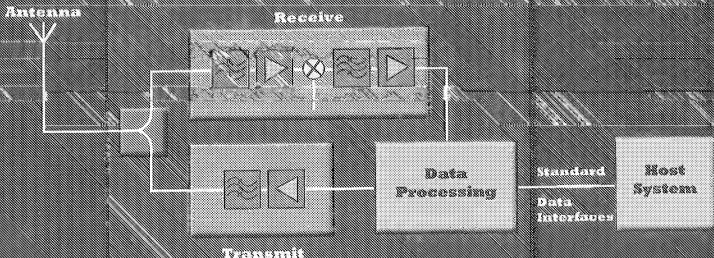
A software program called the Tag-it Navigator is available free of charge. The program can be installed on a desktop computer connected to an S6000 reader, allowing access to all the reader's functions. The Navigator enables users with minimum programming skills to immediately use an S6000 system.

Developer's Kit

For ease of development, TI offers a development kit that includes the two components of a housed reader and housed antenna. Along with the Navigator software, this kit provides a powerful tool to immediately use the Tag-it technology. Demonstrations and feasibility projects can be created with little effort. Due to differences in

radio frequency approval limits in the US and Europe, developer kits are available with different power settings respectively.

Series 6000 Reader



Team Tag-it™

Tag-it based RFID smart label solutions are being brought to market rapidly. Texas Instruments is working with industry leaders to build a strong infrastructure for the rapid adaptation of this new, automatic data capture technology. To further this commitment, TI has launched its worldwide Team Tag-it Program, a partnership of industry-leading companies dedicated to the development and market adoption of RFID smart labels. Participants in this program include hardware and software suppliers, label converters, and systems integration service providers.

For more information about Tag-it and the Team Tag-it Program, including how to subscribe to our bimonthly newsletter *Team Tag-it News*, please visit our web site at www.tiris.com.

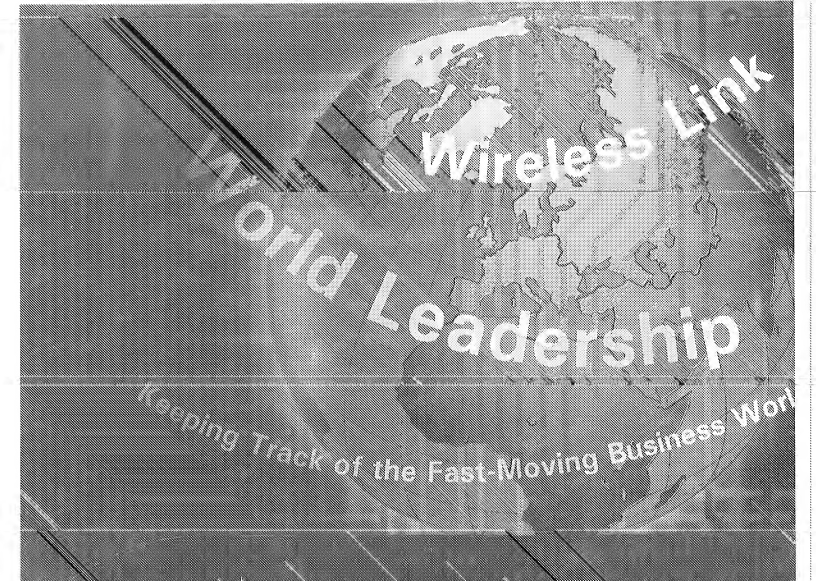


Printers

Scanners

Integration

Label Converters



World Leadership

Wireless Link

Keeping Track of the Fast-Moving Business World

The Industry Leader

In RFID

Texas Instruments established TIRIS (Texas Instruments Registration and Identification System) as a worldwide business venture in early 1991, becoming the first multinational semiconductor company to develop and market RFID systems. Fusing together core competencies in advanced semiconductors, microelectronic packaging, and computer system design, TIRIS has become a standard-setting technology used in thousands of object tracking and data collection applications around the world. Today, TIRIS is the leading supplier of a comprehensive range of field-proven RFID products used in a broad variety of applications. The open platform design philosophy allows rapid, low-cost adaptation to specific requirements in identification. Continually researching enhancements to its products to bring you new uses for RFID, TI is also participating in the development of worldwide RFID standards to ensure that its systems

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